

Letter 1. US Citizen / Jean Public

Comment: spend and spend and spend and spend - why did you let the forest get in such alleged bad shape in the first place. i oppose all commercial salvage and clearcutting on the entire site. i oppose aquatic and vegetation treatment on the entire site. using glyphosate kills bats and all living things - why would you use any such product? the forest is best left alone. this agency is over managing the forest to death. keep out the gun wackos. the forest will take care of itself. it is better by itself than letting the inept forest service monkey around with it. the problem is we have profiteers pushing the forest staff to make money for themselves and the fs staff listens to these harebrained spending schemes. please make sure i receive further reports on your attempt to ram through this spending plan on the american public where 1 out of 2 citizens are presently living in poverty. it is always good when govt agencies have their big spending plans and bludgeon the us citizens for tax money to do them so some profiteer can make big money for themselves. we need less fs. jean public (sic).

Response – Comment 1

Thank you for taking the time to write with your concerns. Please review the summary or go to Chapter 1 for a thorough discussion of the purpose and need for the project as well as the description of the proposed action. In Chapter 3 you'll find descriptions of the existing condition for each resource as well as a detailed effects discussion that discloses impacts to each resource from the proposed action, including social and economic effects.

Letter 2. Steven B. Kamps

Comment 1: In the revised DEIS in the responses to my comments it is stated that NFSR 9411 is a proposed haul road so it would be brought up to BMP standards. I am glad to see this commitment made and am looking forward to seeing this much needed work be done on the road. Additionally there is a segment of this road (perhaps 500 feet or so) just south of the section line for Section 28 and just north of the private ownership in the north half of Section 28 that does not have (sic) harvest unit adjacent to it and will likely not be used as a haul road, but is in need of repair to meet BMP's and improve public safety hazards associated with this stretch of road as well. It would be prudent to include this stretch of road in the contract work to be completed on the ground while the equipment and operators are there. This stretch of road is currently quite narrow, has large rocks in the road prism, as well as two areas where water runs onto the road causing erosion yearly. These resource issues should be included in the contract and fixed while the equipment is a few hundred feet down the road. If you do not intend to fix this segment of road, I would like to be notified in writing of that decision.

It appears that road UR8-68 was likely incorrectly identified to be left open in Alternative 3 while it was identified to be commissioned in Alternative 2. I still support the decommissioning of this unnecessary road that borders my property as there is occasional public trespass from this road on to my private property. Please choose to decommission this road as part of the Final Decision.

Portions of road 9322 are incorrectly located in your roads database and on the maps in the Revised DEIA. There is no road where it is currently marked on the map and it is certainly not an open system road as there is nothing drivable in that location. Additionally, it crosses private land where the public could not legally access it anyway.

The DEIS and Revised DEIS both show roads such as 9321, UR8-132, and UR8-134 that are labeled as Open System Roads or Open UR Roads that cross, or are completely on, private land. The portions of these roads on my private land are not open to the public without my permission. Please address this issue in the by clarifying where these roads cross private land, they are not open for public use.

Response – Comment 1

Thank you for pointing this out. We note your suggestions and will follow up with investigations and possible corrections to the Forest Transportation Atlas (location and allowed uses). The Forest Service does not support road or trail use outside of uses allowed or authorized in existing use agreements.

Road maintenance outside of identified work in the EDLV project is not precluded; if opportunities and funding are available then coordination for additional work may be tied to implementation of the EDLV project. This could include opportunities such as maintenance to NFS Road 9411.

Regarding UR8-68, both situations have been analyzed under the EDLV project. The responsible official may select options from any of the analyzed alternatives to be included in the final Record of Decision. We have noted your support for decommissioning the UR8-68 road; the Draft ROD selected alternative includes obliteration of UR8-68.

Letter 3. Montana High Divide Trails Original of FORM 1 (Gatchell)

Comment 1: We strongly support the preferred alternative which will restore and repair a viable and sustainable trail system in the Cliff Mountain and Baggs Creek area of the Electric Peak Backcountry. We have participated and followed progress of the East Deer Lodge Valley Landscape Restoration Project for several years and are pleased that some of our key concerns about restoring and linking viable trails have now been addressed through changes in the revised DEIS. First we wish to commend the collaborative approach of the Pintler Ranger District, Beaverhead-Deerlodge National Forest and the Stewardship Partners. We greatly appreciate your staff's willingness to listen and make changes to better restore and link trails that will benefit many recreationists for years into the future. The focus of our comments are (sic) Baggs Creek and Cliff Mountain within the Electric Peak Summer Non-Motorized Backcountry Area. Though most of the project area is motorized, according to the Draft EIS, 21% of the EDLV Project Area, within the Electric Peak Roadless Area is allocated to Summer Non-Motorized Management under 2009 Beaverhead-Deerlodge National Forest Plan. Forest plan recreational goals for this part of the project area require a functioning system of trails in non-motorized summer settings that will provide quality opportunities for biking, hiking and horseback riding:

Summer Non-Motorized Allocations: Provide semi-primitive non-motorized recreation settings, and offer opportunities for mountain biking, horse and stock travel, hiking....

The Forest Plan also sets a goal of providing a “system of trails designated for non-motorized uses...” A primary goal of the EDLV Landscape Restoration Project is to authorize: “Improvements to roads and trails in the project area (that) would improve the recreational experience of visitors.”

Under Recreation and Travel, the DEIS states that: Activities included within the Proposed Action are aimed at...maintaining, adding, removing, and improving travel corridors through road and trail additions, closures, and improvements.

The preferred alternative will result in much-needed restoration for three linked trails or segments:

1. Alternative 3 will restore Cliff Mountain Trail # 8047 is described in the DEIS analysis as “virtually non-existent” between Baggs Creek and Airplane Park.
2. Alternative 3 will rehabilitate FR 5182 between Baggs Creek and the Helena NF boundary, replacing severely-eroded sections of this user-created track with sustainable single track trail built to grade and consistent with forest plan goals for recreation.
3. Alternative 3 will restore 5.7 miles of Baggs Creek Trail, which links to Cliff Mountain Trail 8047 and FR 5182.

This work is necessary to close the gap between forest plan recreation goals and long-neglected trail conditions on the ground. Restoring “virtually nonexistent” section of Cliff Mountain Trail #8047 and gullied-out FR 5182 to sustainable single-track trail also serves to link Baggs Creek Trail north and south along the crest with popular backcountry trails and access points at the Middle Fork Cottonwood and Helena National Forest. Linking and restoring trails along the Cliff Mountain-Electric Peak Crest is the number one priority of Montana High Divide Trails.

We support the preferred alternative #3 and stand ready to partner with you and your staff, to raise additional trail funds and provide skilled and enthusiastic trail volunteers to help restore this backcountry trail system.

Response – Comment 1

Thank you for responding and supporting the project.

Letter 4. David C. and Constance M. Cole (FORM 1)

Comment 1: We strongly support the preferred alternative which will restore a sustainable backcountry trail system in the Cliff Mountain and Baggs Creek area of the Electric Peak Backcountry.

We have followed progress of the East Deer Lodge Project for several years. We are glad that the potential for restoring and linking viable trails has been addressed through changes in the revised DEIA. We want to support the collaborative approach of the Pintler Ranger District, Beaverhead-Deerlodge National Forest, and the stewardship partners.

The focus of our particular comments concerns the Baggs Creek and Cliff Mountain trail system within the Electric Peak Summer Non-Motorized Backcountry Area. Although most of the project area is motorized, according to the Draft EIS, 21% of the project area, within the Electric Peak Roadless Area, is allocated to Summer Non-Motorized Management under (sic) 2009 Beaverhead-Deer Lodge national Forest Plan.

Forest Plan recreational goals for this part of the project area require a functioning system of trails in non-motorized summer settings that will provide quality opportunities for biking, hiking, and mule or horseback riding. The Forest Plan also sets a goal of providing a “system of trails designated for non-motorized uses. . .” The preferred alternative will result in much-needed restoration for thee linked trails or segments.”

Alternative 3 will restore Cliff Mountain Trail #8047. This is described in the DEIS analysis as “virtually non-existent” between Baggs Creek and Airplane Park.

Alternative 3 will rehabilitate FR 5182 between Baggs Creek and the Helena National Forest boundary, replacing severely-eroded sections of this user-created track with a sustainable single track trail built to grade and consistent with forest plan goals for recreation. (Sic)

Alternative 3 will restore 5.7 miles of Baggs Creek Trail, which links to Cliff mountain Trail 8047 and FR 5182.

This work is necessary to close the gap between forest plan recreation goals and long-neglected trail conditions on the ground. Restoring the “virtually non-existent” section of Cliff Mountain Trail #8047 and washed-out FR5182 to a sustainable single-track trail also would link Baggs Creek Trail north and south along the crest with popular backcountry trails and access points at the Middle Fork Cottonwood and Helena National Forest. Linking and restoring trails along the Cliff Mountain - Electric Peak Crest is the number one priority of Montana High Divide Trails Working Group.

We support the preferred alternative #3 and are willing to commit our time and sweat equity to help restore this backcountry trail system. As members of the Last Chance Back Country Horsemen, we have partnered with the High Divide Trails Working Group on trail creation and restoration projects throughout southwestern Montana. We look forward to working on these trail projects as well.

Response – Comment 1

Thank you for supporting of the project.

Letter 5. Back Country Horsemen (Lionberger)

Comment 1: Because I utilize mostly non-motorized trails around the state, I support Alternative 3 that will restore the Cliff Mtn Trail #847, re-do FR 5182 to make it “single-track”, and will restore 5.7 miles of the Baggs Creek Trail. If MT Back Country Horsemen can be of assistance in this effort, please let us know.

Response – Comment 1

Thank you for supporting these elements of Alternative 3.

Letter 6. Sun Mountain Lumber (Flynn)

L 6- Comment 1: This is in response to the Revised Draft Environmental Impact Statement for the East Deer Lodge Valley Landscape Restoration Management Project. I am a member of the Forest Stewardship.

Partnership and have been involved in the development of this project since its inception in 2006. It has taken a long time to get to this point in the NEPA process and although I believe there are many more acres within the analysis area containing beetle killed Lodgepole Pine that could have been treated under this project, I do support Alternative 3. I also support the changes from the initial Draft EIS that are incorporated into Alternative 3. I support the use of stewardship contracting to achieve the land management improvement projects like culvert replacements, aspen treatments and stream improvements. The sawtimber that this project will generate is very important to the Timber Industry and will help to maintain the Industry and stabilize local economies.

Response – Comment 1

Thank you for your comment in support of Alternative 3.

L 6-Comment 2: There is one minor item I would like you to address. On Page 37 of the DEIS; Treatment in Timber Units, Paragraph 1; it appears that you are planning to exceed the snag retention requirement of the Forest Plan. There are many acres of standing dead Lodgepole Pine trees within the analysis area that will receive no treatment under Alt. 3. There will be no shortage of snags left on the landscape. Meet the snag retention standard if you must but please do not infer that you will be exceeding it as part of this analysis. Much of the Lodgepole Pine in the EDLV Landscape has been dead for a number of years. There is a percentage of it that has deteriorated to the point of being unusable as merchantable sawlog material. This percentage increases as time passes. Please move forward with this project in as timely a manner as you can muster.

Response – Comment 2

Appendix E in the FEIS show an approximation of large trees (>15” dbh) based on walk-thru exams of the proposed units. Based on that information, snags greater than 15” dbh are limited in the project area. Following direction in the snag standard, if there are insufficient snags in the treatment units, live trees in the same size class must be retained and counted toward the snag requirement. Because

trees and snags greater than 15" dbh are limited in the project area, design criteria for the alternatives requires all trees greater than 15" dbh be retained in the project area (See Project Design Features in Alternative 2 and 3 in the FEIS).

Letter 7. Helena Trail Riders (Onstott)

Comment 1: Helena Trail Riders, a Helena-based stock user group since 1938, would like to express its support for Alternative 3. Within this alternative, our focus is on the following:

Restoration of Forest Route 5182 extending south from the Kading Grade to the Baggs Creek Trail #139. Much of this route is seriously eroded.

Restoration/reconstruction of the historic, but faint, Cliff Mountain Crest Trail (#8047) extending south from the Baggs Creek trail junction to the area called Airplane Park. The northern portion of this trail (in the vicinity of Baggs Creek) receives less use than Forest Route 5182 and trail gradients are not as steep. Therefore, erosion along this trail segment is much less than Forest Route 5182.

Restoration of 5.7 miles of the Baggs Creek Trail (#139) Restoration of the Baggs Creek Trail is appropriate because it would protect efforts expended to restore Forest Route 5182 and Trail #8047. The project would also correct an existing erosion problem in the lower portion of Baggs Creek near the Forest Boundary. Last, restoration of the Baggs Creek Trail would also provide excellent non-motorized trails in southwestern Montana.

Present and past Helena Trail Riders members have used this area and adjacent areas (e.g., Blackfoot Meadows, Limburger Spring, Cottonwood Lake and Thunderbolt Mountain) for many years. This is one of the reasons we became members of Montana High Divide Trails. . ."

Response – Comment 1

Thank you for your response and support of these elements of Alternative 3.

Letter 8. USDI Office of Environmental Policy and Compliance

Comment 1: The Department of Interior has reviewed the Draft Environmental Impact Statement (DEIS), East Deer Lodge Valley Landscape Restoration Management Project, Pintler Ranger District, Beaverhead-Deer Lodge National Forest, Powell and Deer Lodge Counties, Montana and offers the following comments provided by the U.S. Geological Survey (USGS).

The DEIS correctly states that "Salvage with clearcuts and thinning would eliminate potential nesting habitat, as goshawks use denser stands for nesting"; however, the document does not provide a reference for the statement. Anderson et al. (2005) concluded that Goshawks in the western United States clearly use and often select late-successional forests for nesting and foraging. Desimone and DeStefano (2005) found that of 38 occupied nests, 86% (33/38) were in mid-aged (mean stand DBH 23-53 cm, <15 trees/ha >53 cm DBH) or late (≥ 15 trees/ha >53 cm DBH; mean stand DBH >53 cm) closed (>50% canopy closure) structural-stage forest. Goshawks were more likely to persist in the historical nest areas that had about 50% of mature and older closed-canopy forest within the 52ha scale. They recommended retaining existing late closed, late open, and mid closed structure within 52ha scale of the nest site. They also recommended that late closed and mid closed structure combined should not fall below 50% within the 52-ha scale, and should exceed 40% within the 170-ha scale surrounding the nest site. **To optimize conditions for breeding goshawks, they recommended retaining large trees (>53 cm DBH) to help preserve stand integrity, maintain closed canopies, and provide connectivity to alternative nest sites within nest areas. We suggest that the Final EIS include the data and analysis provided in:**

Andersen, D.E., DeStefano, S., Goldstein, M.I., Titus, K., Crocker-Bedford, C., Keane, J.J., Anthony, R.G., Rosenfield, R.N. 2005, Technical review of the status of Northern Goshawks in the western United States Journal of Raptor Research 39(3):192-209.

Desimone, S.M. and DeStefano, S. 2005. Temporal patterns of Northern Goshawk nest area occupancy and habitat: A retrospective analysis. J. Raptor Res. 39(3):310-323.

Response – Comment 1

Your comment stating “The DEIS correctly states that “Salvage with clearcuts and thinning would eliminate potential nesting habitat, as goshawks use denser stands for nesting” was not stated or used in the analysis in the RDEIS. The habitat in the project area proposed for salvage is not considered suitable goshawk habitat as it is composed mostly of dead and dying lodgepole pine. This was detailed in the Revised DEIS, and in the Species of Interest, Northern Goshawk portion of the Chapter 3 Wildlife Section.

Trees greater than 53 cm dbh correspond to trees over 20” dbh. Both action alternatives require all trees greater than 15” dbh be retained in the project area, which corresponds to and exceeds the direction recommended in this comment and literature to retain large trees.

A majority of the project area is dead and dying lodgepole forests, that have reduced canopy cover due to mountain pine beetle. Understanding that the recommendation in Desimone and DeStefano (2005) that you provided states to “maintain closed canopies”, this recommendation is difficult to implement, as closed canopies are not currently present in the majority of the units in the project area. In summary, this lodgepole pine is dead and dying and is not currently considered suitable goshawk nesting habitat. However, if the total amount of forested acres proposed for treatment in the project area 1,704 acres (salvage and commercial thin DF) was considered as suitable habitat (which at current condition is not), this is less than 5% of the habitat present in the project area, providing 95% of the project untreated, providing connectivity within the project area as suggested in this comment.

Additionally, northern goshawk potential nest habitat is currently represented on 18% of the forested area on the BDNF. Through time, potential nest habitat remains at 18% of the forested landscape through 2020 and then increases to 20% by 2030 and 24% by 2060. In general, potential nest habitat continues to be well distributed across the forest in 2010, 2020, 2030 and 2060 (ERG 2010). As natural disturbances inevitably and periodically render any nest habitat unusable, goshawks are highly mobile and known to use altered breeding ranges and alternate nest sites concluding that distribution of potential nest habitat (and connectivity to this habitat) does not appear to be a limiting factor to northern goshawk sustainability across this Forest.

The best available science corresponding to management of habitat surrounding nest sites in this area is detailed in the 2009 Northern Region Northern Goshawk Overview. A nest buffer of 40 acres was the buffer recommended for the habitat types in this region and in this project area (specifically 40 acres on the BDNF, Clough 2000). There are no nest sites within the project area, however design criteria protects known nest sites and provides mitigation to these sites, if later found, within the project area following this direction. This Overview includes the references you provided in this comment and were incorporated as applicable.

Letter 9. Powell County Commissioners

Comment 1: . . . the Powell County Board of Commissioners was approached by the Watershed Restoration Committee six years ago with their concerns about the danger of fire through the Pine Bark Beetle killed trees in the east side of the valley and the disastrous effect it would have on the watershed. The Board. . . agreed and provided \$80,000.00 to do an initial study. This was the beginning of the East Side Stewardship Project and we . . . continue to support this as a stewardship project. Although we are

disappointed by the small amount of acres which can be harvested and the length of time that has elapsed, we do wish it to move forward for the benefit of the county, the watershed, and the forest.

In response to the (RDEIS) for the (EDLV) project we feel that alternative number three is the best option available in this proposal and will support it going into effect with the least possible delay.

Response – Comment 1

Thank you for your involvement and support.

Letter 10. Gerry Jennings

Comment 1: I'm writing to let you know that I support your plan (Alternative #3) to help restore healthy watersheds and repair trails in the Electric Peak Roadless Area. These are vital to backcountry hunters, hikers, mountain bikers and equestrians.

Response – Comment 1

Thank you for writing with your support.

Letter 11. Tom Kilmer

Comment 1: Please accept these comments for the record. Count me in as a supporter of the proposal to restore quiet trails on the Pintler Ranger District near Cliff Mountain. I really like the idea of repairing damaged landscapes and eroded trails. These newly restored and constructed trails will be a great asset to those who value quiet human or horse powered recreation. I fully support alternative 3. I have hiked and camped in this area and know it well. Thanks for proposing to restore the quiet and to protect resources.

Response – Comment 1

Thank you for writing with your support.

Letter 12. Tim Meloy

Comment 1: Please know that the Satre Meloy family is a 100% in support of alternative 3 in the upper Blackfoot and the fine work you are doing. So thank you !

Response – Comment 1

Thank you for commenting on the project. You're welcome.

Letter 13. Clark Fork Coalition (CFC) (McDowell)

Comment 1: The Clark Fork Coalition strongly supports Alternative 3, the preferred alternative, which includes 57 timber harvest units totaling 2705 acres, vegetative and aquatic treatments on 19 restoration units totaling 8,768 acres, and additional restoration activities throughout the project area not specifically tied to timber and restoration units.

Alternative 1 (no action) is unacceptable from a resource management perspective, in terms of current aquatic conditions, grazing impacts on fish-bearing streams, timber health, weed management, conifer encroachment, and roads adjacent to streams. The preferred Alternative 3 is a clear improvement over previously proposed Alternative 2, in the following respects:

- a) Timber harvest volume and total revenue from harvest (to be used for restoration) increased substantially, to 26,880 CCF and \$539,000, respectively.

- b) Riparian area vegetation/aquatic treatments (riparian tree felling, large woody debris enhancement, log worm fencing) are targeted better.
- c) Off-stream watering structures for livestock are increased to seven (7) new structures, reducing future grazing impact on streams.
- d) Number of fish passage barrier culverts is increased from 7 to 12, now addressing most of the aquatic passage issues in the project area.
- e) Total number of perennial stream miles left with adjacent roads is reduced in these watersheds: Cottonwood (Fred); Peterson, Orofino, Dry Cottonwood, and Girard, from a total of 288 to 235 miles, a reduction of 19%. This will result in substantial improvement to fish and wildlife habitat quality in stream corridors.
- f) Long-term sediment supply from roads to perennial streams is expected to go down 34%, which is significantly better than the original proposal (Alternative 2 was only 19% reduction).
- g) Additions of new roads to the system is lower than Alternative 2 (now only 1.2 miles), while road conversion to trails and decommissioning motorized trails goes up slightly to 5.1 miles.

Response – Comment 1

Thank you for participating and supporting Alternative 3.

Comment 2:

- 1) The Clark Fork Coalition strongly supports the proposed improvements to Forest Road 9455 so that it serves as the primary haul route for timber harvest from the southern portion of the project area. Forest Rd. 85, previously planned as the haul route, is unsafe, has serious sediment production issues, and is difficult to maintain without damaging the stream.
- 2) The Clark Fork Coalition strongly supports the closure of road 5163 near the north fork of Perkins Gulch; but believes this road segment should be obliterated or put “in storage” to make it un-drivable. This road connects to private roads and may continue to get illegal use if left in place. If the road is closed and left in place (not maintained), it may deteriorate further and re-initiate sediment discharge into the adjacent stream.
- 3) The Clark Fork Coalition recommends that the activities on UR8-83, a non-system road, include major improvements in drainage to reduce sediment discharge to nearby NF Dry Cottonwood Creek. Table 12, p. 48 only shows “Add UR route to system.”
- 4) A minor error on p. 74: the Mainstem Dry Cottonwood Creek population of cutthroat trout is slightly hybridized (LESS THAN < 10%, not more) with Yellowstone cutthroat..... see data in MFISH online database, MT FWP (i.e., this population is greater than 90% westslope cutthroat genetics).

Response – Comment 2

Thank you for your comments on Forest Roads 9444, 85, 5163 and UR8-83. With regard to UR8-83, maintenance and application of BMPs to reduce sediment introductions will occur on all routes used for haul during this Project. Thank you for your clarification on the genetic purity on Dry Cottonwood Creek.

Letter 14. Todd Harwell

Comment 1: I am just writing to provide my support for the Pintler Ranger District plans to restore quiet trails in the Electric Peak Roadless Area as part of the East Deer Lodge Valley Landscape Restoration Project. As an avid hiker and backpacker I enjoy accessing quiet and well maintained trails. Over the past

three years I have also been able to volunteer and work on trails in the Bob Marshall and in other areas of the state - which is a great experience. The EDLV plan is a great idea and I support it fully! Thank you for the opportunity to comment.

Response – Comment 1

Thanks for writing to express your support of the project.

Letter 15. Mary Carparelli

Comment 1: Support for Alternative #3. Please know that I am among many who support restoration of and creation of more quiet trails. Please restore and keep our watersheds healthy as well as keeping wild habitats intact. I know the value of these places as I am a hiker as well as a trail building/maintenance volunteer.

Response – Comment 1

Thanks for writing to express your support of the project.

Letter 16. Robert Tomich

Comment 1: As a Montana Native as well as a hunter and hiker. I support Alternative 3 that will repair trails for my enjoyment in the East Deerlodge Valley Landscape Restoration Project.

Response – Comment 1

Thanks for writing to express your support of the project.

Letter 17. AWR (Garritty), NEC (Johnson), and MEDC (Kelly)

L 17-Comment 1: The Alliance for the Wild Rockies, Montana Ecosystems Defense Council and Native Ecosystems Council (collectively “Alliance”) submit the following comments to guide the development of the environmental analysis for the proposal. The Forest Service must complete a full environmental impact statement (EIS) for this Project because the scope of the Project will likely have a significant individual and cumulative impact on the environment. **Alliance has reviewed the statutory and regulatory requirements governing National Forest Management projects, as well as the relevant case law, and compiled a check-list of issues that must be included in the EIS for the Project in order for the Forest Service’s analysis to comply with the law. Following the list of necessary elements.**

Response – Comment 1

As described in Chapter One, Purpose and need, “The Forest Service has prepared this Final Environmental Impact Statement (FEIS) in compliance with the National Environmental Policy Act of 1969 (NEPA). It was prepared according to the format recommended by the Council on Environmental Quality (CEQ) and the regulations for implementing NEPA (40 CFR 1500-1508), as amended; the National Forest Management Act of 1976 (NFMA, PL 94-588); and other relevant Federal and State laws.”

L 17-Comment 2: Alliance has also included a general narrative discussion on possible impacts of the Project, with accompanying citations to the relevant scientific literature. These references should be disclosed and discussed in the EIS for the Project

Response – Comment 2

See the following responses to A through 00.

L 17-Comment 3: NECESSARY ELEMENTS FOR PROJECT EIS:**Response – Comment 3 - A thru 00**

- A. Disclose all Beaverhead-Deerlodge National Forest Plan requirements for logging/burning projects and explain how the Project complies with them;

Response A: *Please see the Timber discussion in the Vegetation Section of Chapter 3.*

- B. Disclose the acreages of past, current, and reasonably foreseeable logging, grazing, and road-building activities within the Project area;

Response B: *Please see the Cumulative Effects section for each resource and Appendix A of the FEIS for a general listing of actions considered in cumulative effects analyses.*

- C. Solicit and disclose comments from the Montana Department of Fish, Wildlife, and Parks regarding the impact of the Project on wildlife habitat;

Response C: *MTFWP was included as disclosed in Chapter 4. In addition please see the comments and responses to Letter 29 in this document. Please refer to the Draft and Revised Draft EIS documents published and mailed to you in 2010 and 2012.*

- D. Solicit and disclose comments from the Montana Department of Environmental Quality regarding the impact of the Project on water quality;

Response D: *MDEQ was included as disclosed in Chapter 4. They provided no comments in scoping. Upon review of the Revised DEIS the department provided TMDL information to help update background information for the Final EIS. They stated it was not intended as agency comment on the project. Their information has been incorporated in the final analysis. Since they sent no project comments none are included in this section. Please also refer to the Draft and Revised Draft EIS documents published and mailed to you in 2010 and 2012.*

- E. Disclose the biological assessment for the candidate, threatened, or endangered species with potential and/or actual habitat in the Project area;

Response E: *A BA for wildlife was prepared and concurrence received from the USFWS. The BA is posted on the BDNF website.*

- F. Disclose the biological evaluation for the sensitive and management indicator species with potential and/or actual habitat in the project area;

Response F: *Please see the wildlife section of the EIS*

- G. Disclose the snag densities in the Project area, and the method used to determine those densities;

Response G: *Please see the snag discussion in the Vegetation section.*

- H. Disclose the current, during-project, and post-project road densities in the Project area;

Response H: *Open motorized road and trail densities are discussed throughout the Wildlife section.*

- I. Disclose the Beaverhead-Deerlodge National Forest's record of compliance with state best management practices regarding stream sedimentation from ground-disturbing management activities;

Response I: *Please see the Forest Plan Monitoring Reports posted on the BDNF website.*

- J. Disclose the Beaverhead-Deerlodge National Forest's record of compliance with its monitoring requirements as set forth in its Forest Plan;

Response J: Please see the Forest Plan Monitoring Reports posted on the BDNF website.

- K. Disclose the Beaverhead-Deerlodge National Forest's record of compliance with the additional monitoring requirements set forth in previous DN/FONSI and RODs on the Beaverhead-Deerlodge National Forest

Response K: This information is not readily available as no central database or information source documenting the results exists.

- L. Disclose the results of the field surveys for threatened, endangered, sensitive, and rare plants in each of the proposed units.

Response L: Surveys were conducted within the project area, please see the sensitive plants section of the FEIS for a discussion of the results of surveys.

- M. Disclose the level of current noxious weed infestations in the Project area and the cause of those infestations;

Response M: Please refer to Chapter 3, Invasive Plants for a thorough discussion.

- N. Disclose the impact of the Project on noxious weed infestations and native plant communities;

Response N: Please refer to Chapter 3, Invasive Plants for a thorough discussion.

- O. Disclose the amount of detrimental soil disturbance that currently exists in each proposed unit from previous logging and grazing activities;

Response O: Please see Existing Conditions of Affected Environment - Existing Soil Disturbance in the Soils Section of Chapter 3.

- P. Disclose the expected amount of detrimental soil disturbance in each unit after ground disturbance and prior to any proposed mitigation/remediation;

Response P: Please see effects analysis for Alternative 2 and Alternative 3 in the Soils Section of Chapter 3.

- Q. Disclose the expected amount of detrimental soil disturbance in each unit after proposed mitigation/remediation;

Response Q: Please see effects analysis for Alternative 2 and Alternative 3 in the Soils Section of Chapter 3.

- R. Disclose the analytical data that supports proposed soil mitigation/remediation measures;

S Response: Please review the Soils Section of Chapter 3 for a thorough discussion of this issue.

- S. Disclose the timeline for implementation;

FS Response: Please see the Expected Implementation section in the DRAFT Record of Decision.

- T. Disclose the funding source for non-commercial activities proposed;

Response T: A variety of funding sources may be utilized to implement non-commercial treatments including but not limited to appropriated dollars, partnerships, grants, agreements, and other means.

- U. Disclose the current level of old growth forest in each third order drainage in the Project area;

Response U: The description of our evaluation of old growth is provided under that heading in the Vegetation Section of the FEIS.

- V. Disclose the method used to quantify old growth forest acreages and its rate of error based upon field review of its predictions;

Response V: *The description of our evaluation of old growth is provided under the old growth heading in the Vegetation Section.*

- W. Disclose the historic levels of mature and old growth forest in the Project area;

Response W: *Old growth condition is disclosed in the Vegetation section of the FEIS.*

- X. Disclose the level of mature and old growth forest necessary to sustain viable populations of dependent wildlife species in the area;

Response X: *Discussion of Old Growth habitat and effects of alternatives on wildlife habitat can be found in the Vegetation and Wildlife sections of the FEIS.*

- Y. Disclose the amount of mature and old growth forest that will remain after implementation;

Response Y: *This information is disclosed in great detail in the Vegetation Section, Environmental Consequences, Direct and Indirect Effects for Alternatives 2 and 3.*

- Z. Disclose the amount of current habitat for old growth and mature forest dependent species in the Project area;

Response Z: *Please see the Effects to Old Growth Habitat section in the General Wildlife Habitats Considered section in the FEIS.*

- AA. Disclose the amount of habitat for old growth and mature forest dependent species that will remain after Project implementation;

Response AA: *Please see the Effects to Old Growth Habitat section.*

- BB Disclose the method used to model old growth and mature forest dependent wildlife habitat acreages and its rate of error based upon field review of its predictions;

Response BB: *Please see the Old Growth discussion in the Vegetation section which discloses methodology and error rates.*

- CC Disclose the amount of big game (moose and elk) hiding cover, winter range, and security currently available in the area;

Response CC: *The amount of habitat available for elk before during and after implementation is detailed in the elk section in the FEIS. Substantial information was added to this section from the version in the RDEIS. Moose have not been identified as a species of concern in this area and impacts from this project to moose were not identified as a concern.*

- DD Disclose the amount of big game (moose and elk) hiding cover, winter range, and security during Project implementation;

Response DD: *Please see the Wildlife Habitat Issues and Habitat Trend for discussions of the analysis of secure areas and above response.*

- EE Disclose the amount of big game (moose and elk) hiding cover, winter range, and security after implementation;

Response EE: *Please see the Wildlife Habitat Issues and Habitat Trend for discussions of the analysis of secure areas and above response.*

- FF Disclose the method used to determine big game hiding cover, winter range, and security, and its rate of error as determined by field review;

Response FF: Please see the Wildlife Habitat Issues and Habitat Trend for discussions of the analysis of secure areas. See above response.

GG Disclose and address the concerns expressed by the ID Team in the draft Five-Year Review of the Forest Plan regarding the failure to monitor population trends of MIS, the inadequacy of the Forest Plan old growth standard, and the failure to compile data to establish a reliable inventory of sensitive species on the Forest;

Response GG: A draft five-year review of the Forest Plan does not exist.

HH Disclose the actions being taken to reduce fuels on private lands adjacent to the Project area and how those activities/or lack thereof will impact the efficacy of the activities proposed for this Project;

Response HH: Disclosure of fuels on private lands adjacent to the project area is not done because private lands adjacent to the project area are not included in the analysis area for fire/fuels. The analysis area for fire/fuels is the project area boundary. Please see fire/fuels section of the FEIS.

II Disclose the efficacy of the proposed activities at reducing wildfire risk and severity in the Project area in the future, including a two-year, five-year, ten-year, and 20-year projection;

Response II: Please see Chapter 3, Fire and Fuels section, analysis of alternatives sections.

JJ Disclose when and how the Beaverhead-Deerlodge National Forest made the decision to suppress natural wildfire in the Project area and replace natural fire with logging and prescribed burning;

Response JJ: We are not aware of nor is there any documentation available to suggest that the B-D has made such a decision.

KK Disclose the cumulative impacts on the Forest-wide level of the Beaverhead-Deerlodge National Forest's policy decision to replace natural fire with logging and prescribed burning;

Response KK: Please see response to comment JJ.

LL Disclose how Project complies with the Roadless Rule;

Response LL: Please see Roadless section of the FEIS, because no Inventoried Roadless Areas are impacted by any of the action alternatives, the Roadless Rule is not applicable.

MM Disclose the impact of climate change on the efficacy of the proposed treatments;

Response MM: The Forest Service has prepared agency guidance on "Climate Change Considerations in Project Level NEPA Analysis" (http://www.fs.fed.us/emc/nepa/climate_change/includes/cc_nepa_guidance.pdf). In general, that guidance recognizes that while some actions may warrant qualitative or even quantitative analysis of the effects of an action on climate change, some actions are at such a minor scale that the effects would be meaningless to a reasoned decision.

The EDLV project has several desired outcomes. The effectiveness of achieving those outcomes is presented throughout the FEIS and underlying analysis, keeping in mind that NEPA requires an agency to take a hard look at the consequences of its actions on the environment, not the other way around.

The EDLV proposed actions address site-specific forest health and fish and wildlife habitat, conditions, trends, and risks that exist within the project area today. Those proposed actions are consistent with adaptation actions and strategies recommended for managing forests in light of climate change (Millar et al. 2007; Joyce et al. 2008; Ryan et al. 2008). The vegetation treatments proposed in the Action Alternatives were specifically designed to help achieve the Forest Plan

objective for vegetation to manage or allow disturbance processes (such as the mountain pine beetle outbreak or wildland fire) to occur that produce resilient vegetation communities able to sustain diversity in the face of uncertain future climate influenced disturbances.

In general, such vegetation management actions as those proposed in the project would improve the resilience of forests to climate-induced increases in frequency and intensity of disturbances such as fire and insect and disease epidemics. All proposed activities would create an environment where the targeted vegetation type would have improved growing conditions, creating additional opportunities for new plant establishment or improving resiliency of existing vegetation to disturbances such as wildfire and insect outbreaks per Forest Plan objectives.

This will be done in part by reducing stand densities in the large size classes of Douglas-fir dry forest communities and some lodgepole pine communities to maintain or improve resilient forest conditions. These treatments could assist in restoring or maintaining resilient forests (Bollenbacher et al. 2008). Indirect effects would mitigate effects from the western spruce budworm as decreased stand density would reduce competition stress and increased tree resiliency would allow a greater defensive response to spruce budworm or Douglas-fir beetle attack.

The interdisciplinary team carefully considered the existing conditions and trends within the area, as well as risks, in designing this proposal to achieve those outcomes. Global climate change is not something that is about to happen. It has been ongoing for many decades and the trend is expected to continue into the distant future, continuing to increase risks to our nation's forests (Dale et al. 2001; Barton 2002; Breashears and Allen 2002; Westerling and Bryant 2008; Running 2006; Littell et al. 2009; and Boisvenue and Running 2010). The existing project area conditions and trends are an expression of the local climate (which may or may not parallel ongoing regional, continental, or global trends) as it has interacted with the other local natural and anthropomorphic influences. As such, the ongoing effects of climate change were considered in developing the proposal.

NN Disclose the impact of the proposed project on the carbon storage potential of the area;

Response NN: *In response to public comment, discussion on forest carbon storage and cycling has been added to the Affected Environment and the Direct and Indirect Effects of the Alternatives along with an overview and discussion of efficacy in the Vegetation Section.*

OO Disclose the baseline condition, and expected sedimentation during and after activities, for all streams in the area;

Response OO: *Please see the Hydrology section of the FEIS discussion under General Subwatershed Characteristics.*

PP Disclose maps of the area that show the following elements:

1. Past, current, and reasonably foreseeable logging units in the Project area.
2. Past, current, and reasonably foreseeable grazing allotments in the Project area.
3. Density of human residences within 1.5 miles from the Project unit boundaries.
4. Hiding cover in the Project area according to the Forest Plan definition.
5. Old growth forest in the Project area.
6. Big game security areas.
7. Moose winter range.

FS response: *1. These actions have not been mapped.*

2. Please see Appendix D of the FEIS for livestock grazing allotment map.

3. *Density of human residences within 1.5 miles of the project unit boundaries has not been mapped.*
4. *The Forest Plan has no definition for hiding cover, therefore it was not mapped.*
5. *Old Growth Forest was not mapped because no dataset exists with this information in spatial format.*
6. *Big Game Security areas are termed Wildlife Secure Areas in the FEIS and maps appear in Appendix D of the FEIS.*
7. *Moose Winter range was not mapped because it is not a species analyzed in detail in the FEIS. It is not analyzed in detail because it is not a state species of conservation concern, Threatened or Endangered, Sensitive Species, or Management Indicator Species.*

SOIL PRODUCTIVITY

L 17-Comment 4: The Beaverhead-Deerlodge National Forest (BDNF) adopted the Region 1 Soil Quality Standards, FSM 2500-99-1 (SQS), to assure compliance with the Forest Plan and NFMA. The SQS limit the areal extent of detrimental soil disturbance within logging units to no more than 15%.

Soil Quality Standards “provide benchmark values that indicate when changes in soil properties and soil conditions would result in significant change or impairment of soil quality based on available research and Regional experience” (Forest Service Manual 2500, Region 1 Supplement 2500-99-1, Chapter 2550 - Soil Management, Section 2554.1).

The intent of the Regional Soil Quality Standards is that the FS must, in each case, consider the cumulative effects of both past and proposed soil disturbances to assure the desired soil conditions are met. This includes impacts from activities that include logging, firewood gathering, livestock grazing, and motorized recreation impacts.

The BDNF seems to want to forget about the SQS, since the DM fails does not mention if the project activities might be in compliance with the SQS’s 15% standard in violation of NEPA and NFMA and as we state below there is no proof that logging will comply with the SQS standard.

Response – Comment 4

The FEIS (not a “DM” or Decision Memo) includes information on whether or not the project activities will be in compliance with the Soil Quality Standards (SQS). The Soil Section in this FEIS includes analysis on whether or not the project activities are in compliance with the SQS for harvest units proposed under Alternative 2 and Alternative 3; please see Direct Effects for each alternative in the Soil Section of Chapter 3. There is also discussion as to units that do not meet the SQS and where subsequent restoration would be required to ensure compliance with the SQS.

L-17 Comment 5: The FS does not disclose percent detrimental disturbance estimates provided by watershed. What is the relevance of the areal extent of management-induced soil damage over such a geographic area? Since the FS fails to meaningfully quantify project area watershed compaction and other detrimental soil damage, it cannot disclose meaningful qualitative or quantitative cumulative reductions or losses in soil productivity and hydrologic functioning.

Response – Comment 5

The Forest Service does not analyze soil disturbance at the watershed scale because soil disturbance analysis, as assessed under the Northern Region Soil Quality Standards (USDA Forest Service 1999), is a site specific, activity area approach. Therefore, we use a harvest unit as the analysis area so that we can determine the effects of the harvest activity on the soil resource. Since DSD is a percent of the area, if we were to do an assessment of existing DSD at the watershed scale and then estimate the

increase due to the project, we would show no increase. Additionally, due to the inherent variability of soil properties such as texture, organic matter and surface cover, and the variable soil response to previous management activities, it is not feasible to analyze past management effects at the landscape scale in a meaningful way.

L-17 Comment 6: We object to the lack of any meaningful limitation, on a watershed basis, of the amount of soils so damaged permanently or for the long-term. Again, the SQS's failures are revealed by allowing permanent reductions in soil productivity over arbitrarily-decided levels inside "activity areas" and unlimited amounts of areal extent damage due to roads, landings, etc. outside activity areas. Essentially, the FS's management scheme commits unlimited amounts of the GNF to permanent losses or reductions in soil productivity, without explaining or quantifying the resultant losses in timber yield, ecological dysfunction due to other vegetative alternations, and disruptions in hydrologic functioning. **This does not satisfy NFMA's requirements to maintain soil productivity, and reveals an agency rooted firmly within the Department of Agriculture but unable to maintain the basis for all sustainable agriculture—soil productivity.**

Response – Comment 6

The Forest Service response assumes the comment is intended to reference the BDNF, not the GNF. The R1 Soil Quality Standards do not imply that the FS accepts permanent reductions in soil productivity inside an activity area as stated in the comment. Monitoring data and research show that soil disturbance recovers over time, without any restoration (please see Environmental Consequences - Predicted Detrimental Soil Disturbance and Design Features and Mitigation Measures in the Soil Section of Chapter 3). Restoration of detrimental disturbance where needed will assure that no activity are exceeds the 15% areal standard in the short-term. Over time, the DSD will continue to reduce due to natural processes. Also, the SQS do not imply that we accept unlimited amounts of areal extent damage due to roads, landings, etc. outside of activity areas. Temporary roads and landings outside of activity areas are analyzed as part of the particular harvest unit(s) they are associated with (please see Predicted Detrimental Soil Disturbance in the Soils Section of Chapter 3). The SQS were developed to address NFMA. Alternatives 2 and 3 would be in compliance with the R1 Soil Quality Standards, if implemented. The 15% areal threshold for detrimental disturbances in an activity area is established in the Soil Quality Standards based on available science. The threshold for detrimental disturbance is estimated as a 15% decline in soil productivity (as compared to absolute productivity, or net primary productivity) from undisturbed as the smallest change detectible statistically. It does not imply an absolute productivity decline, but merely that a threshold has been passed (Powers and others 1998). Inherent site productivity is a function of climate, biotic potential and soil. This concept of productivity and the relationship of soil productivity are discussed by Powers and others (1998).

L-17 Comment 6a: The FS apparently believes it never has to even consider, during project planning and review such as for this one, the soil conditions in old cutting units or in areas that have experienced soil damage from other causes such as natural or prescribed fire, cattle grazing, natural or management-induced landslides, off-road vehicle use, or even from a high density of roads in a given watershed—in order to restore such conditions. Only the proposed activity areas are considered.

Response – Comment 6a

Soil cumulative effects occur only when soil impacts from multiple management activities occur on the same location (Please see Spatial and Temporal Context for Effects Analysis in the Soil Section of Chapter 3). Therefore, the activity areas included in Alternatives 2 and 3 are analyzed for existing soil disturbance (from past harvest, grazing, prescribed fire, and recreation) plus any additional disturbance expected from implementation of either action alternative. The FS does not analyze soil disturbance at the watershed scale because soil disturbance analysis, as assessed under the R1 Soil Quality Standards (USDA Forest Service 1999), is a site specific, activity area approach. Therefore,

we use a harvest unit as the analysis area so that we can determine the effects of the harvest activity on the soil resource. Since DSD is a percent of the area, if we were to do an assessment of existing DSD at the watershed scale and then estimate the increase due to the project, we would show no increase. Additionally, due to the inherent variability of soil properties such as texture, organic matter and surface cover, and the variable soil response to previous management activities, it is not feasible to analyze past management effects at the landscape scale in a meaningful way. Please see Spatial and Temporal Context for Effects Analysis in the Soil Section of Chapter 3.

L-17 Comment 7: Alexander and Poff (1985) reviewed literature and found that the amount of soil damage varies even with the same logging system, depending on many factors. For example, as much as 10% to 40% of a logged area can be disturbed by skyline logging. They state:

There are many more data on ground disturbance in logging, but these are enough to indicate the wide diversity of results obtained with different equipment operators, and logging techniques in timber stands of different composition in different types of terrain with different soils. Added to all these variables are different methods of investigating and reporting disturbance.

Response – Comment 7

This paper is relevant to the EDLV Project because, as you mention above, Alexander and Poff (1985) reviewed literature available at the time covering soil disturbance associated with various harvest systems, in various locations including the southwest and northwest. We agree that a diversity of results in ground disturbance due to logging can occur, depending on type of equipment used, topography, and operator. For that same reason, differences in the type and degree of disturbance measured or the protocol used for measuring disturbance also make it difficult to compare results of separate studies. Consistency in the R1 assessment and analysis is provided by: 1) The soil quality standards, which define the type and degree of disturbance to be measured; 2) The National Soil Disturbance Monitoring Protocol, which provides consistent data collection methods; and 3) Past monitoring results, which provide a basis for predicting the potential for disturbance for local logging techniques, in local timber stand composition, terrain and soils. Please see the Soil Section in Chapter 3.

L-17 Comment 8: We object to the FS's assumption that use of BMPs will result in meeting soil quality standards and maintaining soil productivity, since no monitoring has ever occurred on the BDNF to validate such assumptions.

Response – Comment 8

To the contrary, local monitoring has shown BMP's (otherwise known as Soil and Water Conservation Practices, or SWCPs) to be effective. (Forest Plan Monitoring and Evaluation Reports - 2004, 2008, 2009) These practices have been shown to be effective in reducing or ameliorating soil disturbance (Please see Design Feature and Mitigation Measure Effectiveness to Prevent DSD in the Soils Section of Chapter 3.)

L-17 Comment 9: The Sheep Creek Salvage FEIS (USDA Forest Service, 2005a) states at p. 173: Noxious weed presence may lead to physical and biological changes in soil. Organic matter distribution and nutrient flux may change dramatically with noxious weed invasion. Spotted knapweed (*Centaurea biebersteinii* D.C.) impacts phosphorus levels at sites (LeJeune and Seastedt, 2001) and can hinder growth of other species with allelopathic mechanism. Specific to spotted knapweed, these traits can ultimately limit native species' ability to compete and can have direct impacts on species diversity (Tyser and Key 1988, Ridenour and Callaway 2001).

The BDNF does not disclose how the productivity of the land and soils been affected in the project area and forest wide due to noxious weed infestations, and how that situation is expected to change in the coming years and decades.

Response – Comment 9

We agree that noxious weed infestations have the potential to affect soil productivity. However, analysis indicates that the impact to long term soil productivity within the project area is minimal for both Alternative 2 and 3 (Please see Indirect Effects, Invasive Plants in the Soil Section of Chapter 3). Forest-wide impacts are not discussed in the FEIS due to the spatial scale being bound to the project area.

L-17 Comment 10: From Grier et al., (1989): The potential productivity of a site can be raised or lowered by management activities causing a permanent or long-term increase or decrease in the availability of nutrients essential for plant growth. (P. 27.)

Response – Comment 10

This paper is relevant to the EDLV Project. It summarizes both data available at the time (1989) and site factors affecting net primary biological productivity of forested ecosystems of the US, by region. Factors reviewed include intrinsic factors, such as soil properties, and extrinsic factors, such as moisture, nutrients, temperature, and light. Effects of management activities on soil physical and chemical properties are reviewed. Nutrient losses associated with harvesting, effects of burning on soil chemistry, soil chemical changes caused by fertilization, and effects of pollutants on soil chemistry are also covered. We agree that management activities have the potential to affect soil productivity. By adhering to the regional soil quality standards, we are ensuring that soil productivity is maintained over the long term.

L-17 Comment 11: Any time organic matter is removed from a site, a net loss of nutrients from that site also occurs. In timber harvesting or thinning, nutrient losses tend to be proportional to the volume removed. (P. 27.)

Response – Comment 11

The importance of organic matter maintenance through coarse woody debris recruitment is recognized and provided for by the regional soil quality standards (Please see Desired Condition in the Soil Section of Chapter 3). Coarse woody debris ranges from 2-17 tons/acre in the proposed harvest activity areas. The soil quality standards (Graham et al. 1994) recommend leaving 7-25 tons/acre. This is listed as a mitigation measure in the FDEIS (please see Design Features and Mitigation Measures for Alternative 2 and Alternative 3 in the Soils Section of Chapter 3).

L-17 Comment 12: ...Slash burning is a common site preparation method that can affect soil chemical properties tremendously. A great deal of controversy is often associated with using fire because of the wide variety of effects, some of which are definitely detrimental to site quality and some of which are beneficial. (P. 30.)

Response – Comment 12

We agree that slash burning has the potential to negatively affect soils. Local monitoring has shown that burning piles when the soil is moist or frozen protects the soil from detrimental burning (USDA Forest Service, 2006, Forest Plan Monitoring and Evaluation Report, Fiscal Year 2006, Beaverhead-Deerlodge National Forest, Dillon, MT). Alternatives 2 and 3 in the FDEIS include a mitigation measure that specifies piles would be burned when the soil is cold/frozen and moist (please see Design Features and Mitigation Measures in the Soil Section of Chapter 3).

L-17 Comment 13: The BDNF has never attempted to put in place a scientifically sound definition of “soil productivity” that can be measured and compared to baseline conditions.

Response – Comment 13

Soil productivity is defined in FSM 2500, Chapter 2550-Soil Management (Forest Service Manual, National Headquarters (WO), Washington DC, 2010) as “the inherent capacity of the soil resource to support appropriate site-specific biological resource management objectives, which includes the growth of specified plants, plant communities, or a sequence of plant communities to support multiple land uses.” Because soil productivity is not easily measured (Powers and others 1998; Powers 2002), direct measurement of soil productivity is rarely used, even in research. Rather, surrogates of soil productivity are measured. The Northern Region uses soil disturbance as the surrogate for potential effects to soil productivity and has established thresholds for allowable disturbance. According to Powers (1998) the goal is to define the functional elements of soil that sustain productivity and to identify soil quality indicators of these functions. He further describes the attributes of useful indicators. The indicators that the Northern Region has selected are intended to provide an assessment of potential management effects on the soil functions, which work in combination to produce biomass (productivity). Soil productivity is not a stand-alone soil function. Several soil functions contribute to soil productivity. Although one or more soil functions may be affected by previous or proposed activities, soil productivity may or may not be maintained.

L-17 Comment 14: Harvey et al., 1994 state: The ...descriptions of microbial structures and processes suggest that they are likely to provide highly critical conduits for the input and movement of materials within soil and between the soil and the plant. Nitrogen and carbon have been mentioned and are probably the most important. Although the movement and cycling of many others are mediated by microbes, sulfur phosphorus, and iron compounds are important examples.

Response – Comment 14

Harvey and others (1994) review the effects of management on soil properties, processes, and productivity for eastern Washington and Oregon soils. Topics for “eastside soils” covered include physical and chemical properties, organic matter, microbiology, fire, fertilizer application, and the influence of weather and stand on soil water use in ponderosa pine. Since the paper covers a different geographical area, the specific information presented on eastside soils such as ash-influenced soil properties are not applicable; however, general information/concepts presented, such as that found in the Microbial Ecology section quoted in your comment, are relevant to the EDLV project. We agree that microbial processes are important mediators in nutrient cycling in soils. By following prescribed project design features to limit the amount of detrimental soil disturbance associated with project activities and meeting the soil quality standards, these microbial-mediated soil functions would be provided for.

L-17 Comment 15: The relation between forest soil microbes and N is striking. Virtually all N in eastside forest ecosystems is biologically fixed by microbes... Most forests, particularly in the inland West, are likely to be limited at some time during their development by supplies of plant-available N. Thus, to manage forest growth, we must manage the microbes that add most of the N and that make N available for subsequent plant uptake. (Internal citations omitted.)

Response – Comment 15

This comment seems to imply that maximum potential productivity is the goal. Forest soils are periodically limited by N, even under unmanaged conditions. Short-term productivity is often measured over a few years, or even up to a decade and within this time, productivity may decline. Long-term productivity is measured at least at a rotation (80-120 years), and some suggest that the appropriate measure is three rotations. Also refer to response directly above.

L-17 Comment 16: The proposal to log in areas of low soil productivity due to impacts of wildland fires and past logging activities flies in the face of NFMA's requirements to assure regeneration, sustained yield, and maintain soil productivity. Sec. 6. of the National Forest Management Act states:

(g) As soon as practicable, but not later than two years after enactment of this subsection, the Secretary shall in accordance with the procedures set forth in section 553 of title 5, United States Code, promulgate regulations, under the principles of the Multiple-Use, Sustained-Yield Act of 1960, that set out the process for the development and revision of the land management plans, and the guidelines and standards prescribed by this subsection. The regulations shall include, but not be limited to-

(3) specifying guidelines for land management plans developed to achieve the goals of the Program which-

(E) insure that timber will be harvested from National Forest System lands only where-

(i) soil, slope, or other watershed conditions will not be irreversibly damaged;

NFMA regulations at 36 C.F.R. § 219.27 (Management requirements) state:

(a) Resource protection. All management prescriptions shall--

(1) Conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land;

(b) Vegetative manipulation. Management prescriptions that involve vegetative manipulation of tree cover for any purpose shall--

(5) Avoid permanent impairment of site productivity and ensure conservation of soil and water resources;

Response – Comment 16

The EDLV project is not proposing to log in areas of low soil productivity due to impacts of wildland fires and past logging activities. The project has been analyzed to ensure that the cumulative effects of Alternatives 2 and 3 meet R1 Soil Quality Standards, which address NFMA by requiring that new activities do not create detrimental soil conditions on more than 15% of an activity area following project implementation and restoration activities (USDA Forest Service, 1999) as well as meeting Forest Plan Standards. Please see the Soil Section in Chapter 3.

It is also important to note that we are not accepting a 15% reduction in productivity. Just because a sample point in the unit is detrimentally disturbed, doesn't mean that productivity has been reduced substantially and permanently. Often detrimental disturbance heals over time or we can actively manage to accelerate the healing. It is even possible to meet the definition of detrimental soil disturbance and have no effect on productivity. The 15% areal extent presents a point at which we have greater concern.

L-17 Comment 17: The revised draft EIS pretends there is some biological or other tangible difference between uninventoried roadless areas (“unroaded areas”) and Inventoried Roadless Areas (IRAs), yet fails to disclose just what those real, tangible differences are. In fact, there are none. Previous roadless inventories, both RARE II and during preparation of the Beaverhead Forest Plan, omitted unroaded areas adjacent to the IRAs. There are no maps showing the location of unroaded areas—the boundaries of these areas. With the controversy—both social and scientific—surrounding the roadless issue, **the failure to disclose with a map in an EIS all inventoried and uninventoried roadless lands makes no sense and constitutes a violation of NEPA.**

Response – Comment 17

The Roadless section of the FEIS analyzes contiguous unroaded acres in conjunction with the Electric Peak IRA. Please refer to the alternative maps in Appendix D for a visual understanding of where roads are located, and the spaces between them that constitute “unroaded areas”. Please also see Appendix C of the Forest Plan FEIS for a better understanding of how inventoried roadless areas were reviewed and modifications made during the Forest Planning process.

L-17 Comment 18: The idea of doing separate analyses for the vaguely defined “unroaded” areas and contiguous or noncontiguous inventoried roadless lands make no sense. Since the existing inventoried roadless area boundaries were often adopted arbitrarily, analyzing effects on wilderness characteristics of all roadless acres—whether inventoried, uninventoried, uninventoried contiguous with inventoried, or any combination—is clearly called for in this analysis. **Again, with all the controversy surrounding the roadless issue, to analyze impacts on uninventoried roadless lands separate from inventoried roadless areas is completely illogical and constitutes a violation of NEPA.**

Response – Comment 18

All areas without roads were considered in the Roadless section of Chapter 3 of the FEIS.

L-17 Comment 19: From a NEPA perspective, did the FS take a hard-look at, or even fully disclose, the potential direct, indirect, and cumulative impacts of this project on the black-backed woodpecker and use the best scientific information available? The EIS ignores a lot of recent research and discussion on the black-backed woodpecker, which would be necessary to adequately analyze cumulative effects. **From a NEPA perspective, the FS has not taken the requisite hard look at the impacts of salvage logging on the viability of black-backed woodpeckers, especially in light of the devastating impacts of past misguided fires suppression and “salvage” logging policies.**

Response – Comment 19

Chapter 3, Wildlife section analyzes direct, indirect and cumulative impacts to BBWO in detail for each alternative. Samson (2005) reported that black-backed habitat (post-fire and insect outbreaks) has increased across the Region in the last decade. On the BDNF, he reported 19,636 hectares (48,520 acres) of habitat in 1990-1993; by 2000-2003 suitable habitat had increased to 70,451 hectares (174,084 acres). Samson also found that habitat was well-distributed and would not limit black-backed woodpeckers from interacting Region wide. Updated habitat estimates in 2008 (Bush and Lundberg 2008) reported an increase to 159,982 hectares of habitat on the BDNF. The Revised Forest Plan (Appendix B) states “habitat on the BDNF is approximately 13.4 times the amount needed to meet the threshold for viability across the entire Northern Region. Bush and Lundberg (2008) also show that neighboring forests also have sufficient habitat above Samson’s (2006) habitat threshold.

L-17 Comment 20: The Forest Plan for the Beaverhead NF contains no standards applicable to the black-backed woodpecker—a Sensitive species needing special emphasis. That is also why the FS must prepare a conservation strategy, as its own directives indicate, before taking actions that further reduce habitat for the species. **The discussion initiated among FS biologists by Dolan (1998a, b) reveals that the FS had at that time designed a consistent, workable, scientifically defensible strategy to ensure viable populations of the black-backed woodpeckers, and in fact it hasn’t to date.**

Response – Comment 20

Both disease and fire are ecological processes that are important for black-backed woodpeckers. They both operate at relatively large scales both in time and space due to factors such as climate. The species itself is adapted to irruptive movements over large distances to new sources of habitat. This suggests that a viability strategy for the black-backed woodpecker should be regional in scale; that distribution of habitat is not a limiting factor; and that lack of habitat in the BDNF at some points in

time would not impair the viability of the species as a whole if such habitat existed elsewhere (USDA Forest Service, 2009a).

Samson (2005) reported that black-backed habitat (post-fire and insect outbreaks) has increased across the Region in the last decade. On the BDNF, he reported 19,636 hectares (48,520 acres) of habitat in 1990-1993; by 2000-2003 suitable habitat had increased to 70,451 hectares (174,084 acres). Samson also found that habitat was well-distributed and would not limit black-backed woodpeckers from interacting Region wide. Updated habitat estimates in 2008 (Bush and Lundberg 2008) reported an increase to 159,982 hectares of habitat on the BDNF. The Revised Forest Plan (Appendix B) states “habitat on the BDNF is approximately 13.4 times the amount needed to meet the threshold for viability across the entire Northern Region. Bush and Lundberg (2008) also show that neighboring forests also have sufficient habitat above Samson’s (2006) habitat threshold.

Since the time of these analyses, mountain pine beetle numbers have continued to increase across the Forest. In 2005 and 2006 the Region received normal amounts of precipitation and resulted in reductions in population levels of mountain pine beetle. However, in 2007 there was a return to drier-than-normal conditions and infested areas have been increasing since then (Fletcher et al, 2008).

ERG (2010) found that currently, 25% of the forested landscape on the BDNF provided potential foraging habitat for black-backed woodpeckers (0-6 years post-MPB or post-fire in stands >5” dbh). Modeling incorporating future fires, and levels of salvage harvest found that habitat for black-backed woodpeckers will exceed historic range variables (6%) by several-fold, regardless of treatment. In summary, ERG concluded that given the high percentage of modeled habitat, it is unlikely to have errors of a magnitude that would suggest black-backed woodpeckers would become at risk through the 5 decade period.

In summary, Bonn et al. (2007) summarized Key Findings; (1) populations appear to be increasing in the US; (2) habitat is abundant and well-distributed across the Region; (3) habitat has recently increased and is expected to continue to increase as fires and outbreaks continue; (4) the level of salvage timber harvest is insignificant across the Region; and (5) the amount of habitat required for a minimum viable population compared to that available indicates that it far exceeds that needed, given the natural distribution of the species and their habitat..

L-17 Comment 21: The FS chose a cumulative effects analysis area for the black-backed woodpecker that encompasses other recent fires on the BDNF. It did so to justify heavily logging the Sheep Creek fire area; the reasoning being that since the post-fire logging here will largely eliminate black-backed woodpeckers from the fire area, the FS needs to be able to point to other areas that are (so far!) not proposed for logging. **This fails to comply with the habitat and population distribution requirements under NFMA regulations.**

Response – Comment 21

The cumulative effects analysis for the BBWO in the Wildlife section of the FEIS incorporates effects from all past wildfires on the BDNF. There have been no recent wildfires in the analysis area and this project does not propose post-fire logging. The Sheep Creek fire was a post fire salvage project on the Wise River District in the late 90s and was not near or inside the project area. Please refer to the responses to Comments 12 and 14 for habitat and population distribution requirements under NFMA regulations.

L-17 Comment 22: Questions unanswered are very basic: What is a scientifically sound forest-wide standard for the BDNF to insure the viability of the black-backed woodpecker? How much black-backed woodpecker habitat is currently available in the BDNF, how is it distributed, and how much will be available after this latest timber sale?

Response – Comment 22

The analysis for black-backed woodpeckers detailed this information in the RDEIS. That information is also provided in the FEIS. Specifically it was documented that Samson (2005) reported that black-backed habitat (post-fire and insect outbreaks) has increased across the Region in the last decade. On the BDNF, he reported 19,636 hectares (48,520 acres) of habitat in 1990-1993; by 2000-2003 suitable habitat had increased to 70,451 hectares (174,084 acres). Samson also found that habitat was well-distributed and would not limit black-backed woodpeckers from interacting Region wide. Updated habitat estimates in 2008 (Bush and Lundberg 2008) reported an increase to 159,982 hectares of habitat on the BDNF. The Forest Plan (Appendix B) states “habitat on the BDNF is approximately 13.4 times the amount needed to meet the threshold for viability across the entire Northern Region. Bush and Lundberg (2008) also show that neighboring forests also have sufficient habitat above Samson’s (2006) habitat threshold.

L-17 Comment 23: NFMA and the Forest and Rangeland Renewable Resources Planning Act (RPA) require management of national forest system lands in a manner that maximizes long term net public benefits based on the best available science. **This was not done. Please comply with the monitoring requirements of the Forest Plan or NFMA.**

Response – Comment 23

Please see Forest Plan Monitoring Reports available on the BDNF website.

L-17 Comment 24: The EIS is in violation of the Endangered Species Act requirements for lynx. **This is violation of the ESA and an internal Forest Service memo according to Jim Claar from the Regional Office in Missoula.** Mr. Claar told us in a phone conversation that the Forest Service is directed to follow the Northern Rockies lynx management direction in historic lynx habitat. The project area is historic lynx habitat which means it is suitable habitat.

Response – Comment 24

The only federally listed wildlife species for the BDNF are the grizzly bear (threatened) and the Canada lynx. Proposed species include yellow-billed cuckoo (USDI Fish and Wildlife Service 2014).

Direction on occupied and unoccupied Canada lynx habitat was provided in 2009 to Region 1 Forests in a letter from the Regional Forester (USDA Forest Service 2009b). This letter directs unoccupied forests to consider lynx management direction using the “Northern Rockies Lynx Management Direction Standards and Guidelines Consistency Evaluation Table for Project Specific Activities”. This has been done and is found in Appendix F of the FEIS.

L-17 Comment 25: USFS needs to take a hard look at impacts to lynx under NEPA, apply the lynx conservation measures and standards of the NRLMD, and consult on lynx via section 7 of the ESA b/c the best available science -- including recent tracking surveys conducted by WTU -- confirm lynx's presence and use of the area;

USFS's determination that the BDNF is "unoccupied lynx habitat" is arbitrary b/c; (a) the definition of the term fails to take into account all lynx data for the BDNF (including MFWP's data and all pre-1999 data) and USFS never conducted a proper or thorough survey of the area for lynx; and (b) lynx occur in the area; and

USFS has failed to survey for lynx as required by the Biological Opinion on the Northern Rockies Lynx Management Direction (NRLMD).

In order to meet the requirements of the FS/USFWS Conservation Agreement, the FS agreed to insure that all project activities are consistent with the Lynx Conservation Assessment and Strategy (LCAS). The FS did not do so with its EDVL project analysis.

Response – Comment 25

The Canada Lynx was analyzed in detail in Chapter 3.

The Forest Plan at Appendix G, Record of Decision - Northern Rockies Lynx Management Direction, USDA Forest Service 2007) notes: “. . . as noted in the Biological Opinion, the FWS said, and we agree that lynx detection is needed to assess whether further management direction is warranted [citation omitted]. Therefore, we agree to work with the FWS to develop and complete an acceptable protocol to survey currently unoccupied lynx habitat in secondary areas as described in the Biological Opinion, Terms and Conditions #4.”

The Forest began lynx surveys on the Forest in 2012, as per the terms and conditions in the Biological Opinion and ROD for the Lynx Amendment.

Prior to the decision declaring the Forest to be unoccupied, lynx surveys were done across the Region. In the late 1990s a non-invasive hair snag pad DNA survey was conducted on grids across the Region. Lynx detection hair snare surveys were conducted on the BDNF from 1999-2001; no lynx were detected on these hair snare grids. Of eighteen hair samples collected from 9 transects in 1999, on the Deerlodge portion of the Forest samples, were determined to be bobcat, coyote and black bear.

Squires et al. (2003) began what was to be a lynx survey in the Pioneer, Anaconda-Pintler and Flint Creek mountain ranges in 2001 (to the south, west and north of the project area). Rigorous winter snow track surveys were conducted as a first step to determine the presence and distribution of lynx. They only found a single lynx track throughout the three mountain ranges. Although data show that lynx were historically present in the area, the area did not support a resident population at the time of their survey. Because lynx were at such low densities, and they detected numerous wolverines, that study shifted to wolverines.

In the spring of 2009, two different groups did lynx surveys on the Forest. Nate Berg (Greater Yellowstone Lynx Study) identified and surveyed a few areas of lynx habitat using track surveys. Two routes were run in the Flint Creek mountain range, two routes in the Sapphire/Anaconda-Pintler, one route in the Boulder Mountains, two routes in the Pioneers and one route on Mt Haggin WMA (east of Anaconda). One possible set of lynx tracks were found on the West Fork Rock Creek (Sapphire Mountains). Of the other routes, he felt that the Pioneers might be capable of supporting lynx, while the other routes were likely incapable of supporting resident lynx (Berg 2009). Another group, Wildthings Unlimited; conducted hair snares and remote camera systems in the Flint Creek, Pioneer and Boulder mountains. None of the surveys resulted in confirmation of lynx presence (Porco 2009).

L-17 Comment 26: LCAS requirements include:

Project planning—standards.

1. Within each LAU, map lynx habitat. Identify potential denning habitat and foraging habitat (primarily snowshoe hare habitat, but also habitat for important alternate prey such as red squirrels), and topographic features that may be important for lynx movement (major ridge systems, prominent saddles, and riparian corridors). Also identify non-forest vegetation (meadows), shrub-grassland communities, etc.) adjacent to and intermixed with forested lynx habitat that may provide habitat for alternate lynx prey species.
2. Within a LAU, maintain denning habitat in patches generally larger than 5 acres, comprising at least 10 percent of lynx habitat. Where less than 10 percent denning habitat is currently present within a LAU, defer any management actions that would delay development of denning habitat structure.
3. Maintain habitat connectivity within and between LAUs.

Programmatic planning-standards.

Conservation measures will generally apply only to lynx habitat on federal lands within LAUs.

Lynx habitat will be mapped using criteria specific to each geographic area to identify appropriate vegetation and environmental conditions. Primary vegetation includes those types necessary to support lynx reproduction and survival. It is recognized that other vegetation types that are intermixed with the primary vegetation will be used by lynx, but are considered to contribute to lynx habitat only where associated with the primary vegetation. Refer to glossary and description for each geographic area. To facilitate project planning, delineate LAUs. To allow for assessment of the potential effects on an individual lynx, LAUs should be at least the size of area used by a resident lynx and contain sufficient year-round habitat.

To be effective for the intended purposes of planning and monitoring, LAU boundaries will not be adjusted for individual projects, but must remain constant.

Prepare a broad-scale assessment of landscape patterns that compares historical and current ecological processes and vegetation patterns, such as age-class distributions and patch size characteristics. In the absence of guidance developed from such an assessment, limit disturbance within each as follows: if more than 30 percent of lynx habitat within an LAU is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result of vegetation management activities by federal agencies.

Project planning-standards.

Management actions (e.g., timber sales, salvage sales) shall not change more than 15 percent of lynx habitat within a LAU to an unsuitable condition within a 10-year period.

Programmatic planning-standards.

Identify key linkage areas that may be important in providing landscape connectivity within and between geographic areas, across all ownerships.

Develop and implement a plan to protect key linkage areas on federal lands from activities that would create barriers to movement. Barriers could result from an accumulation of incremental projects, as opposed to any one project.

The analysis fails to demonstrate that the EAST DEERLODGE VALLEY LANDSCAPE project activities are consistent with above and all other applicable programmatic and project requirements.

Response – Comment 26

Please see the Lynx analysis sub-section of the Wildlife section in Chapter 3 of the FEIS for a full disclosure of lynx analysis and compliance with applicable requirements. Compliance with the Northern Rockies Lynx Management can be found in Appendix F of the FEIS.

L-17 Comment 27: The attached, Ruggiero et al (1999), the Forest Service's General Technical Report "Ecology and Conservation of Lynx in the United States," states that lynx are present in the Forest.

Ruediger et al (2000), the agencies' "Canada lynx conservation assessment and strategy," considers the Forest within the geographic extent of the lynx strategy.

The Montana Department of Fish, Wildlife, and Parks has compiled a database of lynx occurrences and distribution throughout Montana from 1977 -1998. This information was mapped in Ruggiero et al. (1999) and shows numerous lynx occurrences in the Forest.

The U.S. Court of Appeals for the Ninth Circuit hold that "once an agency is aware that an endangered species may be present in the area of its proposed action, the ESA requires it to prepare a biological assessment" Thomas v. Peterson, 753 F. 2d 754, 763 (9thCir. 1985). If the biological assessment concludes that the proposed action "may affect" but will "not adversely affect" a threatened or

endangered species, the action agency must consult informally with the appropriate expert agency. 50 C.F.R. §§ 402.14 (b)(1), 402.12(k)(1).

Canada lynx are listed under the ESA.

Canada lynx may be present in the project area and the proposed project may affect lynx by temporarily increasing road density, removing vegetative cover, and engaging in mechanized activities that could displace lynx.

The Forest Service did not complete a biological assessment for lynx nor did it consult with USFWS regarding the project's potential impacts on lynx.

The Forest Service's failure to complete a biological assessment and consult with USFWS violates the ESA.

The Forest Service's failure to consult with USFWS regarding the impacts of the Revised Forest Plan on threatened Canada lynx violates the ESA.

Response – Comment 27

A Biological Assessment for terrestrial Wildlife species which included Canada Lynx was submitted to the US Fish and Wildlife Service on July 2, 2014 and concurrence with the findings in that BA was received from the US Fish and Wildlife Service on August 26, 2014. The East Deerlodge Landscape Restoration Management Project will not jeopardize the continued existence of any listed or proposed species.

L-17 Comment 28: The EIS is also in violation of the ESA requirements for grizzly bears. MT FWP says that there is a grizzly bear just southeast of the project area in the Beaverhead-Deerlodge N.F. **Both grizzly bears and lynx need to be included as part of the TEPS and analyzed for how this project will impact them.**

Response – Comment 28

Based on new information received from MT FWP in April 2012, grizzly bears were analyzed in detail in the Wildlife Section of Chapter 3 of the FEIS.

L-17 Comment 29: Page 389 of the revised EDVL EIS says, “On the BDNF, the grizzly bear is known to occur on the Madison Ranger District in the Greater Yellowstone Ecosystem. There have been unconfirmed reports of grizzly bears to the east of the project area (Electric Peak/Thunderbolt Mountain) and on state lands adjacent to the analysis area but there have been none reported within the project area. The project area falls outside of the Yellowstone and Northern Continental Divide Recovery Areas for grizzly bears and is outside of the FWS species distribution lines for the Yellowstone distinct population segment, the Northern Continental Divide distribution lines and the Bitterroot distribution lines (from Forest Plan Biological Assessment 2008). Based on the Biological Opinion for grizzly bears and the Forest Plan, the “action area” is bounded by I-90 on the north and I-15 on the west. The project area is outside of this area. Based on this information, there will be ‘no effect’ to grizzly bears and this species will not be analyzed further.”

A grizzly bear was killed in Elk Park just north of the project area this in 2010. The following article from the 11/9/2010 Helena Independent Record explains how the grizzly was killed.

http://helenair.com/news/state-and-regional/article_3340b668-ec1d-11df-a1b5-001cc4c002e0.html

Elk Park Landowner Cleared In Grizzly Killing By The Associated Press | Posted: Tuesday, November 9, 2010 9:19 am

BUTTE - Federal wildlife officials have cleared an Elk Park landowner of wrongdoing in the shooting death of a grizzly bear the landowner found in a duck pen just outside his house.

U.S. Fish and Wildlife Services Agent Terry Thibeault (TEE'-bow) tells The Montana Standard that the U.S. attorney's office opted not to prosecute the landowner after reviewing the report filed by a federal game warden.

The landowner discovered the 358-pound male bear in his duck pen on June 12. Officials say the man did not know the bear was a grizzly.

Thibeault says the bear was moving toward him and the homeowner felt threatened.

State officials say the Elk Park area isn't known to be occupied by grizzly bears, but grizzlies have been expanding their range.

The area is now known grizzly bear habitat and it is a violation of NEPA to not disclose this. It is also a violation of NFMA to not ensure a viable population of grizzly bears in the project area and is a violation of the ESA to not consult with the US FWS to see if this project or the revised forest plan will adversely affect grizzly bears.

Response – Comment 29

Based on new information received from MT FWP in April 2012, grizzly bears were analyzed in detail in the Wildlife Section of Chapter 3 of the FEIS.

L-17 Comment 30: Wolverines are a MIS for the revised forest plan but no surveys were done in the project area. The Forest Service's failure to ensure the viability of management indicator, sensitive, snag associated, and old growth associated wildlife species violates NFMA and NEPA.

Response – Comment 30

Wolverine was selected as an MIS to measure the effectiveness of maintaining winter denning habitat secure from snowmobile impacts. Public comments revealed concerns about adverse impacts to this species in a stressful time of year. Viability of this species was not identified as a reason for selecting this species as a MIS. At the Forest-scale, summer and winter non-motorized areas were established across the Forest (USDA Forest Service 2009). Wolverines and modeled wolverine denning habitat were one of the criteria used to select winter non-motorized areas and the Plan restricts winter motorized use on over 70% of the modeled wolverine denning habitat (USDA Forest Service 2009a).

To meet the requirements of NFMA and its implementing regulations, the Forest Service focuses on assessing habitat to provide for a diversity of species. NFMA direction is to provide for a diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple use objectives. In addition, it includes direction to consider the best available information in implementing the Plan. Region 1 uses a principle-based approach to population viability analysis (PVA) that is widely agreed to and supported in peer-reviewed, scientific literature (summarized in Samson 2005, amended in March 2006). Wherever Samson 2005 is cited, it incorporates amendments from 2006. Samson 2005 is incorporated by reference.

Samson's (2005) recently conducted region-wide conservation assessments for the northern goshawk, black-backed woodpecker, pileated woodpecker, and flammulated owl, is founded on a principle-based approach to PVA. For each species, he used peer-reviewed science, all known inventory/observation data, vegetation data from Forest Inventory and Analysis (FIA), scientific information on the minimum dispersal distances for species, their home range and body sizes, and well known conservation principles to assess the availability of suitable habitat and ultimately assess short- and long-term viability on each Forest in Region 1. In summary, based on his analysis, habitat for each of these species is abundant and widely distributed. Bush and Lundberg (2008) updated and

substantiated the Samson (2005) findings. The result was generally an increase in habitat for all species except pileated woodpecker. The Biological Evaluation and Biological Assessments/Opinions for the Forest Plan revision also assessed viability for TES species on the BDNF.

Most recently, Ecosystem Research Group (2010) analyzed vegetation changes due to mountain pine beetle across the Forest. They also looked at the effect this would have on habitat for nine selected wildlife species over the next 50 years. This new information has been incorporated into the analyses.

For this project, the above references, as well as available population status and distribution information; occurrence records from survey efforts; hunting and trapping data; and the scientific literature for information on the biological and habitat requirements for species, as well as species response to disturbance were reviewed. This analysis is tiered to the Forest Plan viability analysis.

L-17 Comment 31: Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.

Ruggiero et al 2000

Wolverines generally scavenge for ungulates along valley bottoms and forage and den in remote, high-elevation areas (Hornocker and Hash 1981; Morgan and Copeland 1998). Thus if managers wished to provide habitat for wolverines, they could pay particular attention in the planning process to ungulates winter range and other aspects of habitat quality for ungulates to provide a consistent supply of carcasses for wolverine to scavenge. In addition, wolverines generally avoid areas of human activity. To limit the threat of human-caused disturbance or mortality, managers could restrict access to portions of the landscape where wolverines are most likely to occur.

In order to meet this viability mandate, the 1982 NFMA planning regulations require that the Forest Service select “management indicator species” whose “population changes are believed to indicate the effects of management activities.” 36 C.F.R. § 219.19 (1) (2000).253.

The 1982 NFMA planning regulations require the Forest Service to monitor the population trends of these species and to state and evaluate land management alternatives “in terms of both amount and quality of habitat and of animal population trends of the management indicator species.” 36 C.F.R. § 219.19 (2),(6) (2000).

Wolverines are one of the MIS chosen for the Revised Forest Plan and project area.

The Forest Service does not know the population of wolverines on the Forest.

There is no requirement in the Revised Forest Plan to monitor wolverine population trends in response to management activities, in violation of the 1982 NFMA planning regulations.

The agency’s reliance on the wolverine to indicate effects of management actions in the Forest in general is arbitrary because the agency has no idea what the baseline population is nor does the agency intend to monitor populations after activities are implemented.

The agency does not provide a scientific basis for the road density thresholds it relies upon as a “habitat proxy” for wolverine viability, thus its reliance on those habitat proxies is arbitrary.

The wolverine was recently determined to be warranted for listing under the ESA. 75 Fed. Reg. 78030 (Dec. 14, 2010). It is currently a candidate species, waiting for work to be completed on other species before it is officially listed. The USFWS found that “sources of human disturbance to wolverines include .

. . . road corridors, and extractive industry such as logging . . . The Forest Service admits that the wolverine and/or its habitat are present within the project area and would be impacted by the project. **The Forest Service must go through ESA consultation for the wolverine for this project.**

Response – Comment 31

Wolverine was selected as an MIS to measure the effectiveness of maintaining winter denning habitat secure from snowmobile impacts. Public comments revealed concerns about adverse impacts to this species in a stressful time of year (Forest Plan EIS). Viability of this species was not identified as a reason for selecting this species as a MIS.

Wolverine was listed as a proposed species by the USFWS when the BA was submitted to the USFWS in July 2014. This species was analyzed in detail and the analysis was submitted to the USFWS.

Please refer to response to L-17 Comment 30.

L-17 Comment 32: The 1982 NFMA planning regulations, which were used to promulgate the Revised Forest Plan require the Forest Service to monitor the population trends of management indicator species and to state and evaluate land management alternatives “in terms of both amount and quality of habitat and of animal population trends of the management indicator species.” 36 C.F.R. § 219.19 (2), (6) (2000).

The Revised Forest Plan does not include a requirement to monitor population trends of wolverines.

The Forest Service provides no scientific basis or justification for how or why these standards should or could apply to wolverines when two of the references discuss only elk, and the other reference discusses only grizzly bears.

The “habitat proxy” standards for maintaining wolverine viability are the same as the habitat proxy standards for elk, discussed below.

There was no analysis of the impacts of the Flecceer Mountains project on wolverines in violation of NEPA, NFMA, the APA and the ESA. The habitat as proxy approach is premised upon the assumption that, by taking care of old growth habitat needs of the MIS, the Forest Service can ensure the viability of all species. This theory has a rational basis and should work where, as here, the habitat model underlying the old growth standards and the method for measuring habitat are reasonably reliable. Nonetheless, the ultimate test for whether the habitat as proxy approach is permissible is “whether it ‘reasonably ensures that the proxy results mirror reality.’”

See *Gifford Pinchot Task Force v. United States Fish & Wildlife Serv.*, 378 F.3d 1059, 1066 (9th Cir. 2004) (quoting *Idaho Sporting Cong., Inc. v. Rittenhouse*, 305 F.3d at 972-73). Here, the most compelling evidence suggests that the theory, **applied in this Project Area, does not match reality. The lack of species sightings, otherwise ignored and unexplained by the Forest Service, undermines the assumption that by taking care of habitat, the BDNF can ensure species viability.**

Response – Comment 32

This project is not within or near the Flecceer Mountains project.

To meet the requirements of NFMA and its implementing regulations, the Forest Service focuses on assessing habitat to provide for a diversity of species. NFMA direction is to provide for a diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple use objectives. In addition, it includes direction to consider the best available information in implementing the Plan. Region 1 uses a principle-based approach to population viability analysis (PVA) that is widely agreed to and supported in peer-reviewed, scientific literature (summarized in Samson 2005, amended in March 2006).

Management indicator species (MIS) are designated in the Forest Plan to represent species whose population changes are considered “indicators” for the effects of management activities on representative wildlife habitat. Management indicators are generally defined as “plant and animal species, communities, or special habitats selected for emphasis in planning, and which are monitored during Forest Plan implementation in order to assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent.”

Elk and wolverines are the terrestrial MIS selected in the Forest Plan that are addressed in this analysis. Elk are a commonly hunted species important to the public and the wolverine was selected as the best indicator of the effects of winter motorized disturbance to denning habitat. Additional information on elk and wolverine population conditions and habitat on the Forest is found in the Plan FEIS and project record.

There are no old growth obligate species on the BDNF, however effects to species that utilized old forests can be found in fisher and flammulated owl discussions.

L-17 Comment 33: The Forest Plan requires that the Forest Service ensures the existence of viable population of species, not the theoretical possibility that the species should be present.

Moreover, without any indication that there are viable populations of MIS in the Project Area before the Project, it is unclear how the Forest Service could conclude that viable populations of MIS will be maintained after the Project.

Put another way, there is evidence in the record that effectively rebuts the presumption that the habitat-as proxy-approach is taking care of the species viability in the Project Area. The Forest Service has failed to adequately address or explain this evidence or describe more adequately the potential reasons why the MIS have not been located in the Project Area. Hence, the Forest Service has failed to consider an important aspect of the problem, offered an explanation that runs counter to the evidence, and relied upon a theory that, as applied, is so implausible that it cannot be ascribed to a difference in view or the product of agency expertise.

Accordingly, the decision to rely exclusively upon the old growth standards to meet the Forest Plan requirements for MIS monitoring and ensuring species viability in the Project Area was in error and the **decision authorizing the Project must be set aside, because the Project’s effect on species viability has not been addressed.**

Response – Comment 33

Please refer to the responses to L-17 comments 22, 23, 24 and 25.

L-17 Comment 34: The Forest Service does not provide an adequate explanation as to why retaining only existing large trees in forests that have already been heavily logged (such as the project area) is necessarily sufficient to maintain old growth species viability in light of the fact that the agency does not even know what the historic old growth levels were in the Forest, is not planning to maintain a minimum stand size, and is not planning to maintain the high canopy closure levels necessary for certain species, such as the Northern Rockies fisher and the goshawk.

This analysis is consistent with the Ninth Circuit’s recent decision in Native Ecosystems

Council v. Tidwell, 599 F.3d 926, 935 (9th Cir. 2010) (holding nonexistent MIS cannot serve as proxy). Or is this case there are no MIS in the revised Forest Plan that serve as a proxy. In Tidwell, a Ninth Circuit panel reversed a Montana district court decision upholding the Forest Service’s use of a proxy-on-proxy approach to species viability requirements. The Ninth Circuit held that the proxy-on-proxy approach was not reliable, because the MIS used to determine appropriate habitat, the sage grouse, did not

exist in the area being analyzed and there was evidence in the record suggesting that the sage grouse population in the larger geographic area was trending downward. On that record, the Ninth Circuit said “[i]t is unfathomable how the Forest Service could meet its responsibility to maintain existing species by selecting as a proxy a species that is virtually non-existent in the targeted area.”.

Response – Comment 34

The Forest Plan does not identify any wildlife species as “old growth dependent” and therefore no viability concern was noted in that analysis related to old growth forest.

L-17 Comment 35: Elk are one of the MIS chosen for the Revised Forest Plan and project area.

There is no requirement in the Revised Forest Plan to monitor elk population trends in response to management activities, in violation of the 1982 NFMA planning regulations.

The agency does not provide a scientific basis for the road density thresholds it relies upon as a “habitat proxy” for elk viability. The Forest Service cites Christensen et al (1993), Wisdom et al (2004), and the “Grizzly Bear Amendment” as the scientific basis for the elk road density thresholds in the Revised Forest Plan but none of these citations recommends the high permanent road densities and unlimited increases in temporary road densities adopted in the Revised Forest Plan thus its reliance on those habitat proxies is arbitrary.

The agency does not provide a scientific rationale for failing to discuss and/or adopt other well-established habitat proxies/protections for elk, such as retention of elk security blocks as defined by Hillis, retention of some level of canopy closure, hiding cover, or thermal cover, and restrictions against motorized use in winter range.

Due to the lack of effective habitat protections, elk are currently failing state population objectives.

Despite the lack of scientifically based habitat protections in the Revised Forest Plan and the poor elk population numbers in the affected analysis area, the project will increase temporary road density in the project area above the levels recommended in the best available science. **In light of the above-noted issues, the Forest Service is not ensuring elk viability in the project area.**

Response – Comment 35

The wildlife report, as updated in the FEIS, details the Elk Management Units and Hunting Districts on the BDNF and the elk population estimate for each unit. The MTFWP population objectives and the population estimates are listed for most years between 2003 and 2011, as well as the population objectives from the 2005 and 1992 Elk Plans. The 2011 estimates elk numbers for those Hunting Units encompassing BDNF lands have reached 139% of the 2004 MT Elk Plan objectives for those units. In 2011 in hunting district 215 alone, there were over 2,500 elk, which is over the 1992 elk plan objective for the entire Deer Lodge elk management unit and 156% over the objective for the Hunting Unit. This population information, along with the information for all the hunting districts, supports the statement that elk are widely distributed throughout the forest and are stable to increasing in number in every unit. According to MTFWP, elk are widely distributed across national forests in Montana, including the BDNF and the EDLV project area.

The 2005 Montana State Elk Management Plan advocates maintaining elk security during fall hunting season by limiting road vehicle access because open, motorized roads and trails are the greatest consideration on summer range relating to habitat effectiveness for elk. Open road density and season of use is another primary elk vulnerability consideration, as hunting is the primary source of elk mortality (Christensen et al. 1993).

Numerous studies have found that open motorized roads and trails are the greatest consideration on summer range relating to habitat effectiveness (i.e. Rowland et al 2000). References to habitat effectiveness and road density management suggest that elk are a useful management indicator species to monitor the effectiveness of motorized use management and secure habitat changes especially since elk occur in every habitat type and virtually every elevation across the Forest. Elk were also selected as an MIS because they are one of the most popular hunted species in Montana and were not selected as an MIS due to population viability concerns.

Christensen et al. (1993) directly equates habitat effectiveness to road density recommending “[f]or areas where elk are one of the primary resource considerations habitat effectiveness should be 50 percent or greater” equating to an open road density of no more than approximately 1.7 mi/sq. mi. As mentioned before, the 2005 State Elk Management Plan advocates maintaining elk security during fall hunting season by limiting road vehicle access. The forest plan provides fall open motorized road and trail densities that are compatible with the Elk Plan,

Additionally, Unsworth et al. (1993) noted: “We are not aware of an elk population that is hunted (except those that are hunted under a very limited number of controlled permits) where it has been shown that environmental or habitat factors are limiting the male cohorts of the populations. Habitat is definitely important to the long term viability of elk populations, but we believe that elk populations are more likely to be controlled by harvest than by limits in cover or forage”.

In this analysis, impacts to cover and forage to elk are discussed briefly; however impacts to open road densities are the main variable used to assess the context of this project and effects to the species, as this is the most significant consideration on elk summer range. Additionally, the State elk plan (2005) has not identified any forage carrying capacity issues for this hunting district.

In the past, thermal cover was considered an important habitat component for elk on winter range. However, studies (Cook et al. 2005) have looked at use of thermal cover in winter (and summer) and found no significant, positive effect of thermal cover on condition of elk. They found: 1) no positive physiological benefits to elk from presence of thermal cover; 2) little to no effect of forest canopy of ambient temperature or relative humidity; 3) that there is virtually no support for the thermal cover hypothesis from experimental research specifically designed to establish cause and effect relations; and 4) elk in the dense forest stands lost the most weight and mass. They recommended that the focus for elk management should be forage resources related to production potential of forest successional stages and vulnerability of ungulates to harvest and harassment. This project does address both of those variables in the elk analysis. Impacts to cover are analyzed; however, based on literature, this impact is not a main variable driving the conclusion of each effects analysis.

This information, along with the population information for all the hunting districts, supports the statement that under all alternatives, elk will continue to be widely distributed throughout the forest and maintain a stable population estimate in Hunting District 215 and across the Forest over time.

L-17 Comment 36: The 1982 NFMA planning regulations, which were used to promulgate the Revised Forest Plan, require the Forest Service to monitor the population trends of management indicator species and to state and evaluate land management alternatives “in terms of both amount and quality of habitat and of animal population trends of the management indicator species.” 36 C.F.R. § 219.19 (2),(6) (2000).

The Revised Forest Plan does not include a requirement to monitor population trends of elk.

The Revised Forest Plan does not have a single binding legal standard that limits the percentage of elk cover that can be logged, i.e. there is no hiding cover, thermal cover, or canopy cover retention standard.

The Revised Forest Plan does not prohibit motorized recreation and logging activities in elk winter range. The revised **Forest Plan and this project are in violation of NEPA, NFMA, and the APA.**

Response – Comment 36

The Forest Plan is not in violation of NEPA, NFMA and the APA. This project complies with those acts as it meets Forest Plan direction including standards. The forest Plan does in fact have a monitoring requirement to monitor elk populations using MTFWP data, please refer to Chapter 5 of the Forest Plan, Monitoring and Evaluation.

L-17 Comment 37: The Revised Forest Plan sets two “habitat proxy” standards for elk in the project area by (1) setting a maximum open motorized road and trail density of 2.0 mi/sq. mi. in the Upper Clark Fork Landscape year-round, except during the five week fall rifle hunting season, and by (2) setting a maximum open motorized road and trail density goal for Hunting District 215 at 1.5 mi/sq. mi during the five week fall rifle hunting season.

The Revised Forest Plan allows unlimited increases in temporary road construction as long as there is no net increase above the maximum levels listed above. FP 56.

The Forest Service cites Christensen et al (1993), Wisdom et al. (2004), and the “Grizzly Bear Amendment” as the scientific bases for the Revised Forest Plan’s elk road density thresholds.

Of those three citations, neither Wisdom et al (2004) nor the “Grizzly Bear Amendment” provides recommendations for numeric road density standards for elk. Only Christensen et al (1993) provides numeric road density threshold recommendations for elk.

Christensen et al (1993) recommends elk habitat effectiveness of 70% in summer range and at least 50% in all other areas where elk are one of the primary resource considerations. According to Figure 1 in Christensen et al (1993), this equates to a maximum road density of approximately 0.65 mi/sq mi. in summer range and approximately 1.79 mi/sq mi. in all other areas. **These recommendations were not followed in the Revised Forest Plan and the Forest Service fails to provide a rational justification for the deviation from these recommendations.**

Response – Comment 37

Christensen et al. (1993) directly equates habitat effectiveness to road density recommending “[f]or areas where elk are one of the primary resource considerations habitat effectiveness should be 50 percent or greater” equating to an open road density of no more than approximately 1.7 mi/sq. mi. As mentioned before, the 2005 State Elk Management Plan advocates maintaining elk security during fall hunting season by limiting road vehicle access. The forest plan provides fall open motorized road and trail densities that are compatible with the Elk Plan, with only one hunting unit (318) exceeding the open road density objective above 1.5 mi/sq mile. The OMRTDs and hunting unit 215, before and after the project for each of the alternatives is displayed in the Wildlife section.

L-17 Comment 38: The Clean Water Act requires that federal agencies comply with its provisions. The agency must protect water quality and comply with state water quality standards on National Forest system lands. *Marble Mountain Audubon Soc. v. Rice*, 914 F.2d 179, 182 (9th Cir. 1990); *Oregon Natural Resources Council v. U.S. Forest Service*, 834 F.2d 842, 848 (9th Cir. 1987); *Northwest Indian Cemetery Protective Ass’n v. Peterson*, 794 F.2d 688, 697 (9th Cir. 1987); 33 U.S.C. 1323(a) (“Each department, agency, or instrumentality of the executive [branch] . . . shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution”); 16 U.S.C. 1604(g)(3)(E)(iii) (timber may be harvested only where “protection is provided for streams, streambanks shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment”); 36 C.F.R. 219.23(d) (“Forest Planning shall provide for -- Compliance with requirements of the Clean Water Act, the Safe Drinking Water Act, and all substantive and procedural requirements of Federal, State and local governmental bodies”) and 36 C.F.R. 219.27(a)(4) (“All management

prescriptions shall . . . Protect streams, streambanks, shorelines, lakes, wetlands and other bodies of water”).

Section 303(d) of the CWA (33 USC §1313(d)) requires that states list water quality limited segments of bodies of water within its jurisdiction. The listed segments are not meeting state water quality standards or failing to meet designated uses due to identified reasons. The states are required to develop Total Maximum Daily Loads (TMDL) for these waters (33 USC Sec 1313 (d)(1)(c)). TMDLs are designed to address all sources of pollution limiting the water quality of the public waters and should include point and non-point sources of pollution, such as sediment generated from logging activities. In the absence of a TMDL federal agencies have a duty to avoid further degradation of WQLS stream segments. The East Deerlodge Project violates this duty and thereby violates the CWA. **A TMDL must be written for each 303 (d) listed water body before a decision is signed. Since this has not been done, this project violated the Clean Water Act.**

Response – Comment 38

We don't agree with your assessment that a TMDL must be written before any land management decision can occur in a project area with a 303D listed stream. Notwithstanding, a TMDL has in fact been prepared for the only 303D listed stream in the analysis area: Peterson Creek. Please see the hydrology section of the FEIS for a discussion of how the alternatives meet the Clean Water Act requirements.

L-17 Comment 39: Page 69 of the DEIS says bull trout are “...absent from all EAST DEERLODGE VALLEY LANDSCAPE project area tributary streams.” How have you looked for Bull Trout? The Helena National Forest fish biologist told me that bull trout are hard to find by shocking and said that you have to snorkel at night to find them. Page 70 of the DEIS only discusses 2002, 2007, and 2008 electro-fishing results. The revised EIS does not seem to adequately answer these questions.

Page 70 of the DEIS also states: “Species may occur in areas not currently depicted figs. 16 through 20, or in areas for which comprehensive surveys have not been conducted. Site-specific surveys are frequently necessary to determine the presence of species. Absence of a species present in a data layer is not evidence of absence. Additionally, the presence of one species does not imply that other species were searched for but not found.” To comply with the ESA and bull trout critical habitat rules, you need to conduct a survey designed specifically to search for bull trout.

Response – Comment 39

Thank you for your comment regarding bull trout presence and for pointing out a potential source of confusion from the 2010 DEIS. The statement you quote from page 70 of the 2010 DEIS was not carried into the 2012 Revised DEIS. No survey data exists that suggests Bull Trout are present within the analysis area for aquatic resources. However, the FEIS acknowledges bull trout have the potential, albeit unlikely, to be present within the aquatics analysis area. Due to this potential we are in the process of initiating informal consultation with the U.S. Fish and Wildlife Service on potential project effects to Bull Trout consistent with the ESA Section 7 consultation requirements.

L-17 Comment 40: I mentioned in my previous comments on the DEIS that Page 74 of the DEIS says: “South Fork Cottonwood Creek supports WCT for approximately 0.8 miles upstream of the Forest boundary (fig. 16; Table 19). South Fork Cottonwood Creek has an unauthorized irrigation diversion at river mile 1.4. The diversion structure constitutes a partial barrier to fish movement and the unscreened ditch may result in some fish loss to the ditch system. Fish were not observed upstream of a natural barrier that occurs about 328 feet upstream of the diversion (Gerdes 2008).” This illegal diversion needs to be stopped as part of this project. This issue is ignored in the revised EIS.

Response – Comment 40

Based on the best available information we believe this diversion is not located on National Forest System Lands.

L-17 Comment 41: Peterson Creek is listed as an impaired water body or WQLS under the Clean Water Act. Page 155 of the revised DEIS notes: “The Forest Plan calls for management actions consistent with Total Maximum Daily Loads (TMDLs), which are promulgated through Section 303 of the Clean Water Act (USDA Forest Service 2009a, page 13). Where waters are listed as impaired and TMDLs and Water Quality Restoration Plans are not yet established, management actions should not further degrade waters, and any water quality restoration efforts should support beneficial uses. Peterson Creek within and downstream of the project area is designated as a water quality impaired stream according to the 2008 Montana 303(d) list.”

A TMDL was partially completed for Petersen Creek in March of 2010. Petersen Creek is listed as Functioning at risk and the other streams in the Peterson Creek watershed, Jack Creek and Dieders Fork are both listed as non-functional to functioning at risk. Page 100 of the DEIS says that Peterson Creek Beneficial Use Not Supporting Aquatic Life and Cold Water Fishery and that Forest roads and grazing are the primary causes.

The TMDL for Peterson Creek states that : “Temperature related impacts were identified as a cause of impairment to the beneficial uses of aquatic life and coldwater fisheries in Peterson Creek.” I don’t see any mention of temperature of Peterson Creek in the DEIS except on page 155 where it states temperature is one of the causes of the not supporting beneficial use. **This project is not meeting the temperature requirements of the TMDL.**

Response – Comment 41

This project does not propose actions which will promote or prolong the temperature impairment in Peterson Creek as discussed in further detail in the aquatics section of the FEIS.

L-17 Comment 42: Page 99 of the DEIS and page 155 of the revised DEIS says: “Jack Creek has been impacted by historic placer mining within the project area. According to the Forest Service fish biologist, there is an authorized irrigation diversion, but the exact location of this diversion is not known.”

Since one of the causes of high temperature is low flow, this illegal diversion needs to be stopped as part of this project. The Forest Service has not responded to my comments.

Response – Comment 42

Based on the best available information we believe this diversion is not located on National Forest System Lands.

L-17 Comment 43: Page 107 of the DEIS says: “South Fork Dry Cottonwood Creek has been affected by mining, livestock, roads, and diversions. The tributaries to this stream all appear to be re-routed via diversion ditches when they enter private land within the project area. It appears that the diversion ditches on private lands do not serve the beneficial uses for which they were originally constructed, either irrigation or mining (Salo 2008).” **This diversion needs to be stopped since the water is not being used for the beneficial use intended. This is ignored in the revised DEIS.**

Response – Comment 43

Based on the best available information we believe this diversion is not located on National Forest System Lands.

L-17 Comment 44: Page 178 of the revised DEIS says: “Roads in the analysis area that would be used as timber haul routes and that occur adjacent to streams within RCAs are likely to have increased sediment delivery to streams due to higher traffic levels during hauling. Similarly, road-stream crossings along log haul routes would also have an increase in traffic and an increase in sediment delivery. The average sediment delivery per road-stream crossing was estimated at 132 lbs/year for low traffic levels in the analysis area using the WEPP model. When traffic levels are high, such as during log haul, the average predicted sediment delivered per road-stream crossing was 348 lbs/year. **The portions of proposed haul routes outside of RCA’s have only a minimal capability to deliver sediment to streams, and thus were not considered for this analysis.**” This is a violation of the Clean Water Act, the Forest Plan, Montana Water Quality Laws, NFMA and the APA.

Response – Comment 44

The commenter does not explain how the statement quoted from the DEIS violates the cited laws. We believe this project fully complies with the Clean Water Act, the Forest Plan, Montana water quality laws, NFMA and all other applicable laws and regulations.

L-17 Comment 45: Page 116 of the DEIS says: “In the Peterson Subwatershed, there are three roads that would be used for log haul that have portions of their length within Peterson Creek RCAs and are therefore likely to deliver sediment to stream channels: FR 1504, FR 5170, and FR 8518. Six of the 10 road-stream crossings are along routes that would be used for log haul. The largest increases in sediment delivery during implementation would occur within Jack Creek and Dieders Fork Peterson Creek, where sediment delivery would increase by 109 percent and 104 percent, respectively. These increases in sediment are largely a result of increases in traffic along road-stream crossings.” The revised DEIS confirms this.

The Upper Clark Fork TMDL calls for a 54% reduction in sediment load from roads but the DEIS and RDEIS says that there will be no long term reduction in the amount of sediment coming from roads into Peterson Creek and 71% increase in the amount of sediment in the short term. **This seems to be a violation of the Clean Water Act.**

Response – Comment 45

The commenter does not explain how the statement quoted from the DEIS violates the clean water act. We believe this project fully complies with the Clean Water Act, the Forest Plan, Montana water quality laws, NFMA and all other applicable laws and regulations.

L-17 Comment 46: The following comments still apply in the RDEIS.

Page 69 of the DEIS says: “The project area is located within the Upper Clark Fork Recovery Subunit of the Clark Fork River Unit. The Upper Clark Fork River is designated as critical habitat for bull trout. Emphasis in the Upper Clark Fork Recovery Unit is on securing the existing distribution of bull trout within core areas and increasing the abundance and connectivity of local populations. The specific actions needed for the recovery of bull trout within the subunit are itemized in the Bull Trout Draft Recovery Plan (FWS 2002).

Federal agencies are required to consult with USFWS on non-emergency actions they implement, fund, or authorize that might affect critical habitat. Although the project area does not contain habitat presently used by bull trout or designated critical habitat, the headwaters of the project subwatersheds contribute to water quality in the Clark Fork River. Therefore, actions that improve or maintain high water quality and streamflow within these tributary streams will aid in reaching objectives for bull trout recovery in the Clark Fork River.” **Since this project is adversely modifying bull trout critical habitat please conference with the U.S. Fish and Wildlife Service and since it could adversely affect bull trout**

please consult with the U.S. Fish and Wildlife Service to ensure that you are complying with the Endangered Species Act (ESA).

Response – Comment 46

We disagree with your assertion that this project would adversely modify bull trout critical habitat. A description of the analysis area (which does not include the Clark Fork River) are found in Chapter 3 of the aquatics section in the FEIS. The FEIS acknowledges bull trout have the potential, albeit unlikely, to be present within the aquatics analysis area. Due to this potential we are in the process of initiating informal consultation with the U.S. Fish and Wildlife Service on potential project effects to Bull Trout consistent with the ESA Section 7 consultation requirements.

L-17 Comment 47: Page 109 of the DEIS says: “The Forest road density in the Fred Subwatershed (1.8 miles/mile²), including system and non-system roads is currently functioning at risk (USFWS 1998) (Table 23). The Forest system and non-system road densities in the other five subwatersheds are currently functioning at unacceptable risk (>2.4 miles/mile²) “.

Page 115 of the DEIS reports: “The reductions in Forest road densities in all subwatersheds are expected to improve aquatic habitat conditions; however, none of the post-project road densities would result in properly functioning condition according to the USFWS guidelines (<1 mile/mile² and no valley bottom roads). Fred Fish Key Subwatershed would continue to be functioning at risk. The other five subwatersheds would continue to be functioning at unacceptable risk (> 2.4 miles/mile² and many valley bottom roads)”.

More roads need to be closed as part of this project to comply with the Clean Water Act and the ESA.

Response – Comment 47

The guidelines you are referring to are a portion of the evaluation process we used for determining baseline habitat conditions for bull trout in Rock and the Flint Creek watersheds. In that process thresholds were developed for 17 indicators so information on habitat conditions could be assimilated to guide where habitat improvement could be accomplished. The threshold for road density simply suggests that road densities are higher than desired to minimize sediment delivery to stream systems. You are misrepresenting the context and meaning of the data when suggesting watersheds with road densities higher than those defined in our process are out of compliance with the Clean Water Act.

We believe this project fully complies with the Clean Water Act. With regard to compliance with ESA, the FEIS acknowledges bull trout have the potential, albeit unlikely, to be present within the aquatics analysis area. Due to this potential we are in the process of initiating informal consultation with the U.S. Fish and Wildlife Service on potential project effects to Bull Trout consistent with the ESA Section 7 consultation requirements.

L-17 Comment 48: Page 110 of the DEIS states: “The primary sources of increased erosion and sedimentation from the Proposed Action would be generated from ground disturbing activities during timber harvest, and subsequent haul of timber resources on forest roads that are within RCAs, or that cross stream channels. Decreases in sediment delivery are also expected from Proposed Action activities such as road closures and restoration activities to decrease livestock impacts to streams.” Since the economic section of the DEIS says this timber sale will lose money, please consider dropping the timber sale part of this project and use the money saved to pay for the part of the project which reduces sediment flowing into streams.

Page 114 of the DEIS reports: “This analysis shows that the Proposed Action would result in an average short-term net increase in sediment from timber harvest within the affected subwatersheds. However,

because of the nature of the streams in this project area, it is unlikely that this sediment would be transported below NFS lands.”

This is an arbitrary and capricious statement. There is no scientific data supporting this conclusion. Sediment from Butte mines were only stopped at the Milltown Dam. This statement makes one question the entire validity of the soils section of the DEIS. Fine sediments from logging roads will travel all the way to the next dam after the former Milltown dam.

Response – Comment 48

Thank you for your comments. In the FEIS the Hydrology and Aquatic Resources Direct, indirect and cumulative effects analysis area boundaries have been adjusted to include the area between the Clark Fork River and the Project Area. The reasons for adjusting the boundary are provided in Chapter 3 of the FEIS, in the Aquatics Section. There we also describe a discussion regarding our ability to discern effects from a specific source as the distance from that source increases.

L-17 Comment 49: Page 114 of the DEIS continues: “Furthermore, the stream channel condition and sediment regimes are generally in much worse condition on private lands below NFS lands, and any downstream sediment effects would likely be masked by sediment that is being generated from activities on these privately owned lands.” Nothing in the Clean Water Act says it is OK to pollute private lands if they are more polluted than public lands. The intent of NEPA and NFMA is not to dump pollution from Forest Service land onto private land, i.e. out of sight out of mind. The Forest Service’s proposal will put more sediment into an already polluted stream. As the DEIS states on page 88, **it is the duty of the Forest Service to clean up this stream instead of just pass on the new pollutants to the private land owner down stream.**

Response – Comment 49

Thank you for your comment. We believe the hydrology and aquatics analysis displays that improvements in water quality will broadly occur in all affected the watersheds, as a result of this project. The statement you refer to is intended to describe the potential for measurable effects that would result in some areas where sediment levels may increase.

L-17 Comment 50: An “impaired waterbody,” or “water quality limited segment,” appears on the Montana Dept. of Environmental Quality (DEQ) 303(d) database because it is not fully supporting beneficial uses. **The project will bring additional harm to local westslope cutthroat trout and bull trout fisheries, key beneficial uses of great public importance.**

Response – Comment 50

Our analysis indicates – and we agree with those findings – that WCT populations in the analysis area will gain substantial benefits from implementation of this project.

With regard to bull trout, the FEIS acknowledges there is some potential, albeit unlikely, for them to be present within the aquatics analysis area. Due to this potential we are in the process of initiating informal consultation with the U.S. Fish and Wildlife Service on potential project effects to Bull Trout consistent with the ESA Section 7 consultation requirements.

L-17 Comment 51: The history of the Forest Service is rooted in the watershed protection ethic. NFMA and its CFR regulations set forth the minimum management requirements that emphasize the policy of holding the line on water quality, and protecting fisheries, streams and water resources.

NFMA § 6(g)(E)(iii) (regulations shall) insure ... protection ... for streams, ...lakes ...from detrimental changes in water temperatures, and deposits of sediment ... likely to seriously and adversely affect water conditions or fish habitat.

NFMA §6(g)(3)(F)(v) insures that clearcutting ... (is) carried out in a manner consistent with the protection of soil, watershed, fish ... resources ...

36 CFR 219.27 (a)(1) conserve soil and water resources ...

36 CFR 219.27 (a)(4) protect streams ... lakes ...

36 CFR 219.27 (v)(5) ... ensure conservation of soil and water resources...

36 CFR 219.27 (f) ... protection, enhancement ... of soil and water resources.

Streams currently not meeting water quality standards represent an unacceptable current management condition. **Listed streams in the project area are evidence the Forest Service has violated state water quality standards in the past. The project will make matters worse. Continuing the adverse effects caused by similar management practices, utilizing similar BMPs, on watersheds throughout the project area is unacceptable.**

Response – Comment 51

Thank you for your comment, but we have to respectfully disagree. Our analysis indicates there will be substantial reductions in stream sediment delivery to a number of streams. Where reductions would not occur from road related actions, there are other things like riparian protections that would provide substantial improvements over longer periods. In the few instances where sediment levels would increase during implementation without subsequent reductions, the increases are not large enough to cause measurable degradation for any substantial length of stream or for an extended period of time.

L-17 Comment 52: 36 CFR 219.23(e) evaluation of existing or potential watershed conditions that will influence ... water yield, water pollution ...

Insufficient date is provided for an accurate assessment of the water quality impacts of the project. The Forest Service must evaluate watersheds in the project area for effects on water quality. Applying “all reasonable land, soil and water conservation practices,” or BMPs, has led to a never ending downward spiral for water quality and fisheries. BMPs are “reasonable” only if beneficial uses are protected. **Clearly, the project fails to comply with state water quality standards.**

Response – Comment 52

Thank you for your comment. We respectfully disagree that this project would cause non-compliance with State water quality standards.

L-17 Comment 53: The project fails to evaluate, protect and enhance water resources and fisheries, in violation of NFMA § 6(g)(E)(III) and NFMA §6(g)(3)(F)(v), 36 CFR 219.23 and 36 CFR 219.27.

Response – Comment 53

We believe this project is in full compliance with NFMA, as indicated in the FEIS

L-17 Comment 54: Many of the lands in the Project area should be classified as physically unsuitable (FSH 2409.13-21.5) It is unacceptable to prescribe logging where restocking problems persist, knowingly converting “suitable” timber lands into grasslands to feed livestock. “Adequate restocking” has neither been defined, nor properly analyzed, using field monitoring results. This analysis should take into account the likely effects of climate change on productivity and restocking requirements.

36 CFR 219.27 (c)(3) When trees are cut to achieve timber production objectives, the cuttings shall be made in such a way as to assure ... adequately restock the lands within 5 years after final harvest.

The Project provides no assurance that units can be restocked within 5 years after final harvest, in violation of NFMA Sec. 1604(g)(3)(E)(ii) and 36 CFR 219.27 (c)(3).

Note: 16 USC Sec. 1604 (k) is the section that requires “economic suitability.”

THE FOREST SERVICE DID NOT TAKE A HARD LOOK AND DISCUSS THE RESPONSIBLE OPPOSING VIEWS OF SCIENTISTS WHOSE PUBLISHED PAPERS UNDERMINE THE CENTRAL UNDERLYING ASSUMPTION OF THE EAST DEERLODGE PROJECT. (sic)

Response – Comment 54

This question was previously responded to in the EDLV RDEIS. In addition it is addressed in this document under Timber Harvest on National Forest Lands (16 U.S.C. 1604(g)(3)(E)). See also responses to MM and NN under L-17 Comment 3.

The regulation 36 CFR 219.27(c)(3) is no longer in effect as the final National Forest System Land Management Planning Rule became effective May 9, 2012, superseding the 1982 planning procedures. None of the factors identified under the current planning regulations at 36 CFR 219.11(a)(1) (Lands not Suitable for timber production) are applicable for the areas proposed for timber management in the EDLV project area. Other laws and regulations are detailed in the Vegetation Section.

L-17 Comment 54: Published scientific reports indicate that the logging prescription proposed by the Forest Service for the East Deerlodge area will actually increase fire severity -- not reduce fire severity - as assumed by the Forest Service. Because this issue is the central underlying theme that is critical to support the proposed logging project, the Forest Service must candidly disclose, consider, and fully discuss the published scientific papers that analyze whether commercial logging is an effective means of fire suppression. **The Forest Service should have discussed published scientific papers, which make findings based on actual studies, not simply on models. Not doing this is a violation of NEPA, NFMA, the APA and the Forest Plan In the analysis, the Forest Service should have at least addressed the issues of** (a) which studies are applicable to lodgepole pine forests, (b) whether logging large diameter trees helps or hinders efforts to reduce fire risk, (c) whether logging without prescribed burning helps or hinders efforts to fire risk, and (d) whether all small diameter trees must be removed in order to reduce fire risk. In this analysis, the Forest Service should not include internally produced, unpublished documents written by land managers. These types of documents are biased in favor of logging, and therefore not scientifically reliable. See Ruggiero (2007)(discussing the fact that land managers are part of a different branch of the Forest Service than research scientists, and the position of the land managers **implies that they are not independent of policy decisions, and therefore may not be scientifically credible**). **The Forest Service should disclose and discuss the findings of - at least - the following studies:**

Raymond, Crystal L. & David L. Peterson. 2005. Fuel treatments alter the effects of wildfire in a mixed evergreen forest, Oregon, USA. Canadian Journal of Forestry Research 35: 2981 - 2995; and

Odion, Dennis C., Evan J. Frost, James R Strittholt, Hong Jiang, Dominick A. Dellasala, Max A. Moritz. 2004. Patterns of fire severity and forest conditions in the western Klamath Mountains, California. Conservation Biology 18:4: 927-936.

Response – Comment 54

The EDLV project’s purpose and need (Chapter 2 of the FEIS) does not include reduction of fuels, fire risk, hazard or anything associated with fire and fuels. Regardless, we reviewed and were previously familiar with the papers cited above due to our experience with the fire ecology of both Oregon and Northern California (where these studies took place) during previous professional experience in Region 5 and 6 of the Forest Service. We find them irrelevant to the analysis because the studies are geographically so distant from the project area as to be not applicable to the forest ecology, topography, fire behavior, fire return interval, and generally the fire ecology of the project area. The

analysis in the FEIS in the Fire and Fuels section predicts little to no long-term change in fuel and fire behavior at the project scale from either of the action alternatives.

L-17 Comment 55: Since the project's goals are partly to reduce the chances that fire will destroy private structures and harm people, the current fuel/fire hazard situation on land of all ownerships within the WUI (at least the WUI that's relevant to this area) must be displayed on a map. More importantly, the fuel/fire hazard situation post-project on land of all ownerships within the WUI must also be displayed on a map. The maps provided don't display the most important picture around which this project is conceptualized. **Based on lack of proper mapping of current and projected conditions, the EIS doesn't accurately disclose the threats to private structures and people under any scenarios, for all alternatives. It must be discernable why some areas are included for treatment and others are not.**

Response – Comment 55

Please see response to comment above.

L-17 Comment 56: The FS does not have a detailed long-term program for maintaining the allegedly safer conditions, including how areas will be treated in the future following proposed treatments, or how areas not needing treatment now will be treated as the need arises. The public at large, and private landowners, must understand the implications of the long-term efforts, including the amount of funding necessary, and the likelihood based on realistic funding scenarios for such a program to be funded both adequately and in a timely manner.

The EIS mix, and thus confuse, two separate issues, those being hazardous fuels and “forest health.” The EIS fails to clearly disclose which treatment units are for fuel reduction and which are to deal with the alleged “forest health” problem(s). Clearly, maintaining parts of the Forest in “safer” fuel conditions is not in accord with maintaining natural, ecological processes. “Excessive fuels” from one perspective is cover habitat from the perspective of a pine marten, and the very processes that cause the alleged “forest health” problems are what create dead tree habitat for a myriad of native wildlife. The FS's position seems to be that we can have both, but that's like the empty promise that came out of the Forest Planning process that said the FS could meet its ASQ and still provide for viable populations of Bull trout, lynx, ...etc. This is the very same failure to face reality that has resulted in much-needed judicial oversight of this National Forest.

The EIS fails to deal lucidly with the hazardous fuels issue on the appropriate landscape scale. The EIS only discusses fuel conditions in the areas proposed for treatment, yet wildland fire operates beyond artificial ownership or other boundaries. The EIS fails to answer a fundamental question: Will the fuel reduction activities be in any way significant, when one of any number of potential fire scenarios plays out on the land in the foreseeable future? One cannot tell, because the fuel conditions in the larger landscape surrounding “treatment units” are not adequately discussed.

Likewise, the appropriate landscape scale for the “forest health” issues is also beyond the treatment units, but not adequately considered.

Response – Comment 56

Please see response to comment above.

L-17 Comment 57: The EIS also fails to deal with the fuels issue on the appropriate temporal scale. The EIS basically theorizes fire behavior at some short-duration fixed time period following treatment (ignoring the heightened fuel risk due to the logging activities, by the way) but doesn't consider the obvious fact that vegetation response to the proposed activities will be rapid in the understory, and also significant for smaller tree growth in the years following treatment. How those vegetation changes would

affect fire behavior when one of any number of possible fire scenarios plays out on the land in the foreseeable future is also glossed over in the EIS's overly simplistic analyses.

And since this "fuel reduction regime" was not a planning scenario dealt with in sufficient detail (if at all) during Forest Plan development, both the project-level and programmatic ecological and economic costs and impacts go unexplained and undisclosed. The BDNF must disclose to the public just how much of the Forest is considered to be likewise "out of whack" in alleged "forest health" terms and more importantly, disclose how much of the Forest is to be treated for fuel reduction in a manner that emphasizes fuel conditions over native ecological processes.

Response – Comment 57

The FEIS does in fact analyze fuel loading and potential fire behavior during discrete temporal timeframes as discussed in further detail in the "Spatial and temporal Context for Effects Analysis" sub-section of the Fire and Fuels Section of the EIS in Chapter 3. Two temporal timeframes are analyzed: "short-term analysis of conditions immediately upon harvest for Alternatives 2 and 3, and long-term analysis covering conditions as they would exist > 15 years. The analysis predicts no heightened fuels risk because all activity fuels will be treated after slashing or timber harvest. Changes in fuel models before and after implementation including fire behavior in terms of rate of spread and flame length are discussed in the Fire and Fuels section. The Forest Plan recognizes the role of fire in the ecosystem and gives us an opportunity to manage fire for multiple objectives for any number of possible fire scenarios across the landscape.

L-17 Comment 58: Hayward, 1994 states:

Despite increased interest in historical ecology, scientific understanding of the historic abundance and distribution of montane conifer forests in the western United States is not sufficient to indicate how current patterns compare to the past. In particular, knowledge of patterns in distribution and abundance of older age classes of these forests is not available. ... Current efforts to put management impacts into a historic context seem to focus almost exclusively on what amounts to a snapshot of vegetation history—a documentation of forest conditions near the time when European settlers first began to impact forest structure. ... The value of the historic information lies in the perspective it can provide on the potential variation... I do not believe that historical ecology, emphasizing static conditions in recent times, say 100 years ago, will provide the complete picture needed to place present conditions in a proper historic context. Conditions immediately prior to industrial development may have been extraordinary compared to the past 1,000 years or more. Using forest conditions in the 1800s as a baseline, then, could provide a false impression if the baseline is considered a goal to strive toward.

Hayward, 1994 essentially calls into question the entire manipulate and control regime, as represented in the EIS. The managed portion of the BDNF has been fundamentally changed, as has the climate, **so the Forest Service must analyze how much land has been fundamentally changed forest wide compared to historic conditions, and disclose such information to the public in the context of an EIS by completing the Forest Plan Revision process.**

Response – Comment 58

A response to this question was published in the Revised DEIS and was carried thru in this FEIS

In Hayward's study of great grey owls he also states that "habitat use patterns suggest that conservation of this owl is not necessarily at odds with forest land management" and "Managers realize that descriptions of historic environments provide a window, although a opaque view, into the range of variations experienced by organisms in the past. Scientists understand that historical ecology

can aid in understanding important ecological concepts such as successional patterns, community theory, and biogeography.” Hayward’s study supports the purpose and need of this project.

Hayward also states: “The mix of forest habitats used by great gray owls fit patterns that occur in managed forest landscapes when the maintenance of mature and older forest is an integral part of management planning. Therefore, immediate threats to the persistence of this owl on a local and regional basis are not great.” There would be no treatments in old growth under Alternative 3. For Alternative 2, treatments in old growth stands would not reduce the age, number of large trees, or basal area below the ‘minimum criteria’ required for Eastern Montana old growth, as described in Standard 1 for Vegetation in the Forest Plan. Also, “... habitat use patterns suggest that conservation of this owl is not necessarily at odds with forest land management in which conservation of biological diversity is a priority equal to commodity development.” Biodiversity is the first goal listed in the Forest Plan for vegetation where “A variety of disturbance processes are managed or allowed to occur that produce resilient vegetation communities able to sustain diversity in the face of uncertain future climate-influenced disturbances. Resilient vegetation communities will have a mosaic of species and age classes of trees, shrubs, grasses, and forbs for animal forage and cover, and perpetuate the diversity of plants and the microbial and insect communities upon which they are dependent.”

As stated in the wildlife section of the FEIS, great gray owls begin nesting in March or April. The spring break-up closure is from April 1 to June 15, so there would be no activities during most of the nesting season. Surveys were done in three units in 2010 and no great gray owls were found. The Forest Plan wildlife Standard 9 also applies to great gray owls if any are seen or reported.

The Record of Decision was signed in February 2009 for the Final Environmental Impact Statement and Revised Land and Resource Management Plan for the BDNF. The Revised Forest Plan has been in use since the beginning of 2009. An analysis comparing historic vegetation conditions is available in the FEIS for the plan.

L-17 Comment 59: The FS’s usual response to our comment that the fire planning issue is indeed programmatic, is that it is “out of the scope” of a project analysis, which is precisely our point: the FS has so far failed to deal with this issue within the appropriate forest wide or landscape level. In the absence of such planning, the public and decision maker for this project proposal is extremely uninformed. So, for example, fire suppression actions are never disclosed, as NEPA requires.

Recently, Huff, et al., 1995 stated:

(I)ntensive forest management annually produces high fuel loadings associated with logging residues. As a by-product of clearcutting, thinning, and other tree-removal activities, activity fuels create both short- and long-term fire hazards to ecosystems. The potential rate of spread and intensity of fires associated with recently cut logging residues is high (see for example, Anderson 1982, Maxwell and Ward 1976), especially the first year or two as the material decays. High fire-behavior hazards associated with the residues can extend, however, for many years depending on the tree species (Olson and Fahnestock 1955). Even though these hazards diminish, their influence on fire behavior can linger for up to 30 years in the dry forest ecosystems of eastern Washington and Oregon. Disposal of logging residue using prescribed fires, the most common approach, also has an associated high risk of an escaped wildfire (Deeming 1990). The link between slash fires and escaped wildfires has a history of large conflagrations for Washington and Oregon (Agee 1989, Deeming 1990).

Regeneration and seral development patterns can have a profound effect on potential fire behavior within landscapes by enhancing or diminishing its spread (Agee and Huff 1987, Saveland 1987). Spatially continuous fuels associated with thick regeneration in plantations can create high surface-fire potential during early successional stages. This was evident in most of the roughly 275 hectares of 1- to 25-year-old plantations burned in the 3500-hectare 1991 Warner Creek Fire in the Willamette

National Forest (USDA 1993). The fire moved swiftly through the openings created by past harvests, killing nearly all the regeneration but usually missing adjacent stands >80 years old.

Logged areas generally showed a strong association with increased rate of spread and flame length, thereby suggesting that tree harvesting could affect the potential fire behavior within landscapes.

In general, rate of spread and flame length were positively correlated with the proportion of area logged in the sample watersheds.

Increased rate of spread means that the perimeter of the fire will grow much faster. Generally, a faster perimeter growth makes a wildfire harder to contain.

Other scientists have doubts about the efficacy of intensive fuels reductions as fire-proofing methods. DellaSala, et al. (1995) state:

Scientific evidence does not support the hypothesis that intensive salvage, thinning, and other logging activities reduce the risk of catastrophic fires if applied at landscape scales ... At very local scales, the removal of fuels through salvage and thinning may hinder some fires. However, applying such measures at landscape scales removes natural fire breaks such as moist pockets of late-seral and riparian forests that dampen the spread and intensity of fire and has little effect on controlling fire spread, particularly during regional droughts. ... Bessie and Johnson (1995) found that surface fire intensity and crown fire initiation were strongly related to weather conditions and only weakly related to fuel loads in subalpine forest in the southern Canadian Rockies. . . . Observations of large forest fires during regional droughts such as the Yellowstone fires in 1988 (Turner, et al. 1994) and the inland northwest fires of 1994 . . . raise serious doubts about the effectiveness of intensive fuel reductions as "fire-proofing" measures.

The Sierra Nevada Ecosystem Project, in its 1996 "Final Report to Congress: Status of the Sierra Nevada" (University of California-Davis, Wildland Resources Center Report No. 36) states:

More than any other human activity, logging has increased the risk and severity of fires by removing the cooling shade of trees and leaving flammable debris." And, "Timber harvest, through its effects on forest structure, local microclimate, and fuel accumulation, has increased fire severity more than any other recent human activity. ... Although silvicultural treatments can mimic the effects of fire on structural patterns of woody vegetation, virtually no data exist on the ability to mimic ecological functions of natural fire."

DellaSala et al., 1995 state:

The effectiveness of fuel breaks remains a subject of debate within and outside the fire management community. There are many reasons for this broad range of opinion, among them that objectives can vary widely, fuel break prescriptions (width, amount of fuel reduction, maintenance standards) may also vary, they can be placed in many different fuel conditions, and may be approached by wildland fires under a variety of normal to extreme weather conditions. Furthermore, fuel breaks are never designed to stop fires but to allow suppression forces a higher probability of successfully attacking a wildland fire. The amount of technology directed at the fire, and the requirement for firefighter safety, both affect the efficacy of fuel breaks in the suppression effort

Sustained alteration of fire behavior requires effective and frequent maintenance, so that the effectiveness of any fuel treatment, including fuel breaks, will be not only a function of the initial prescription for creation, but also standards for maintenance that are applied. The efficacy of many past fuel breaks has been largely lost because of inadequate or no maintenance. If a fuel break is to remain effective, permanent cover type must occur.

The EIS takes a very narrow, simplistic view of the science on fuel reduction and ignores scientific information that argues against its conclusions. The EA must be re-written to acknowledge the controversies, and remove its already-made decision biases.

Response – Comment 59

The cited passages represent very early findings in the ever-evolving body of science regarding the effects of silvicultural treatments on fuels and subsequent fire behavior. Furthermore, it appears the commenter is referencing a different project analyzed with an EA. This project is the East Deerlodge project and is analyzed with an EIS.

L-17 Comment 60: Graham, et al., 1999a point out that thinning can result in faster fire spread than in the unthinned stand.

For example, the 20-foot wind speed must exceed 50 miles per hour for midflame wind speeds to reach 5 miles per hour within a dense Stand (0.1 adjustment factor). In contrast, in an open stand (0.3 adjustment factor), the same midflame wind speeds would occur at only a 16-mile-per-hour wind at 20 feet.

Depending on the type, intensity, and extent of thinning, or other treatment applied, fire behavior can be improved (less severe and intense) or exacerbated.” ... Fire intensity in thinned stands is greatly reduced if thinning is accompanied by reducing the surface fuels created by the cuttings. Fire has been successfully used to treat fuels and decrease the effects of wildfires especially in climax ponderosa pine forests (Deeming 1990; Wagel and Eakle 1979; Weaver 1955, 1957). In contrast, extensive amounts of untreated logging slash contributed to the devastating fires during the late 1800s and early 1900s in the inland and Pacific Northwest forests.

Depending on intensity, thinning from below and possibly free thinning can most effectively alter fire behavior by reducing crown bulk density, increasing crown base height, and changing species composition to lighter crowned and fire-adapted species. Such intermediate treatments can reduce the severity and intensity of wildfires for a given set of physical and weather variables. But crown and selection thinnings would not reduce crown fire potential.

In regards to ecosystem sustainability and wildland fire, Cohen and Butler (2005) state:

Realizing that wildland fires are inevitable should urge us to recognize that excluding wildfire does not eliminate fire, it unintentionally selects for only those occurrences that defy our suppression capability—the extreme wildfires that are continuous over extensive areas. If we wish to avoid these extensive wildfires and restore fire to a more normal ecological condition, our only choice is to allow fire occurrence under conditions other than extremes. Our choices become ones of compatibility with the inevitable fire occurrences rather than ones of attempted exclusion. (Emphasis added.)

It seems that the project is a part of a wider, continuing indiscriminate fire suppression strategy, without consideration of sensible wildland fire use—elevating the odds for the type of extreme events most feared.

Response – Comment 60

*Graham also makes the point that “thinning in general will lower crown bulk densities and redistribute fuel loads significantly, thus decreasing fire intensities **if the surface fuels are treated...**these removals have been shown to be effective in reducing crown fire potential, especially around homes (emphasis added).” Both action alternatives specify that activity fuels generated from timber harvesting (typically the types of residual materials that serve as surface fuels post-harvest) will be piled and burned to certain tons/acre specifications.*

L-17 Comment 61: Cohen and Butler (2005) made recommendations regarding fuel treatment in an interface zone in the Boulder River canyon on the Gallatin NF, following a two-day field trip. Based upon research, and investigation following other instances of wildland fire, Cohen and Butler (2005) specify the need to focus primarily on the Home Ignition Zone (HIZ). The HIZ is approximately 150 from a home. They state, “(W)e cannot mitigate a highly vulnerable HIZ with fuel reduction activities beyond the HIZ; a highly vulnerable HIZ remains highly vulnerable even when surrounded by a fuel break. ...The high intensity wildfire has no direct flame effect on the building ignition potential outside the HIZ.”

To the degree that this proposal focuses on dead and dying trees, it is not about reducing crown fires. Cohen and Butler (2005) note that dead trees that have lost their needles pose minimal crown fire risk as compared to trees with canopy intact—live or dead:

When needles fall from the tree canopy the tree loses the principal crown fire fuel. These needles are now part of the more compact and much less intensively burning surface fuel bed. Thus, the crown fire spread is impeded at this location. Primary attention for removing insect killed trees that retain their needles should occur within the HIZ and in any areas where intense fire behavior will produce a life safety concern (falling dead trees usually do not become a problem until after the needles have dropped.)

Cohen and Butler (2005) explain the “life safety” concept, defining it as “...about preventing fatalities during an extreme wildfire that includes all reasonable options.” The researchers focus on the need to treat fuels to establish safe areas in the event of extreme wildfire events, and treat fuels to reduce potential extreme case fire intensity along escape routes to these safe areas or well beyond the fire’s danger zone. Outside these safe areas, the escape routes, and the HIZ, these researchers indicate no need to focus on fuel reduction for life safety reasons in the CPZ.

None of the so-called cumulative effects discussions adequately discloses the effects of past management activities in a logically-defined analysis area, on land of any ownership, to the issue of how those projects have affected the fuel situation now referred to as “hazardous.” How have past and ongoing logging and other management activities across this landscape affected fuel conditions and the “forest health” issues alleged by the EA? We know that old high grade and clearcut-type logging leads directly to vegetative conditions that are not natural and present an elevated (above natural) risk of fire. **Yet nowhere does the EA present an intelligent cumulative effects discussion about past management in relation to its “Purpose and Need” in violation of NEPA, NFPA and the APA.**

Response – Comment 61

The project is not a fuels project and nowhere in the purpose and need does it refer to the fuels situation as “hazardous”. The purpose and need for the EDLV Landscape Restoration Management Project is to contribute to attainment of the following forest wide goals and objectives for timber management, vegetation, aquatic resources, and wildlife habitat. There is nothing in the purpose and need regarding WUI, Fuels, Structure Protection or life safety. Activity fuels created by past logging within the project area have been treated.

L-17 Comment 62: It is time for the Forest Service to be more honest with the public about Fire ecology and move away from trying to prevent and suppress wildfire as one of its primary occupations.

Response – Comment 62

Current policy and Forest Plan direction allows for the management of fire with multiple objectives

L-17 Comment 63:

Published scientific reports indicate that climate change will be exacerbated by logging, and that climate change will lead to increased wildfire severity (including drier and warmer conditions that may render

obsolete the proposed effects of the Project). The former indicates that the Butte Lookout Project may have a significant adverse effect on the environment, and the latter undermines the central underlying purpose of the Project. **Therefore, the Forest Service must candidly disclose, consider, and fully discuss the published scientific papers discussing climate change in these two contexts. At least the Forest Service should discuss the following studies:**

Depro, Brooks M., Brian C. Murray, Ralph J. Alig, and Alyssa Shanks. 2008. Public land, timber harvests, and climate mitigation: quantifying carbon sequestration potential on U.S. public timberlands. *Forest Ecology and Management* 255: 1122-1134.

Harmon, Mark E. 2001. Carbon sequestration in forests: addressing the scale question. *Journal of Forestry* 99:4: 24-29.

Harmon, Mark E, William K. Ferrell, and Jerry F. Franklin. 1990. Effects of carbon storage of conversion of old-growth forest to young forests. *Science* 247: 4943: 699-702

Harmon, Mark E, and Barbara Marks. 2002. Effects of silvicultural practices on carbon stores in Douglas-fir - western hemlock forests in the Pacific Northwest, USA: results from a simulation model. *Canadian Journal of Forest Research* 32: 863-877.

Homann, Peter S., Mark Harmon, Suzanne Remillard, and Erica A.H. Smithwick. 2005. What the soil reveals: potential total ecosystem C stores of the Pacific Northwest region, USA. *Forest Ecology and Management* 220: 270-283.

McKenzie, Donald, Ze'ev Gedalof, David L. Peterson, and Philip Mote. 2004. Climatic change, wildfire, and conservation. *Conservation Biology* 18:4: 890 -902.

Response – Comment 63

The response to this question was published in the Revised DEIS and was carried thru into this FEIS as a section called Overview of Forest Carbon Cycling and Storage (i.e., “carbon flux”) in the Vegetation section.

L-17 Comment 64: The FS refused to study in detail any alternative which would have implemented prescribed fire fuels treatments that did not include removal of commercial wood products because such an alternative would not have met the goal of removing merchantable forest projects in violation of NEPA, NFMA and the APA. The FS also refused to study in detail any alternative consider the impacts of their proposed actions on climate change in violation of NEPA, NFMA, the forest plan and the APA. Eventually, if the FS does not begin considering the long-term cumulative impacts of its industrial logging on climate change, the courts will likely force the FS to consider those impacts. This important consideration could lead land managers and policy makers to the conclusion that National Forest lands are more valuable to the national and global community as carbon sinks than as commercial tree farms.

Response – Comment 64

See also the responses to Letter 17 Comments 3, parts MM and NN;

An alternative that does not include removal of commercial wood products is provided in Alternative 1 (no action). The analysis of Alternative 1, which is provided throughout Chapter 3 of the EDLV DEIS, RDEIS, and FEIS, provides for the effects analysis of salvage harvest. The decision maker may choose any alternative, subset of an alternative, or combination of alternatives, including the option not to salvage harvest.

L-17 Comment 65: ALTERNATIVES NOT CONSIDERED The BDNF provides inadequate management strategies to insure viability of the pine marten. Ruggiero, et al., 1998 and Bull and Blumton, 1999, indicate that vertical and horizontal diversity provided by snags and large down woody debris are

important habitat characteristics for the pine marten, another MIS wildlife species on the BDNF. **The kind of “treatments” proposed would reduce the availability of prey species for the marten.**

Response – Comment 65

To meet the requirements of NFMA and its implementing regulations, the Forest Service focuses on assessing habitat to provide for a diversity of species. NFMA direction is to provide for a diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple use objectives. In addition, it includes direction to consider the best available information in implementing the Plan. Region 1 uses a principle-based approach to population viability analysis (PVA) that is widely agreed to and supported in peer-reviewed, scientific literature (summarized in Samson 2005, amended in March 2006). Wherever Samson 2005 is cited, it incorporates amendments from 2006. Samson 2005 is incorporated by reference.

Pine marten are ranked G5 (common, widespread and abundant locally) and S4 (populations apparently secure in the state) by the Montana Natural Heritage Program. They are not on the State’s Species of Concern list and are not considered to be at risk.

The Forest Plan ensures viability for wildlife, including pine marten, through application of the Forest-wide goals, objectives and standards. Forest Plan direction ensures management of a variety of habitats in various successional stages so as to ensure the viability of a variety of species associated with those different habitats. In addition, retention of specific habitat components (snag, live tree and down woody debris retention) is addressed through incorporation of Wildlife Standards 3, 4 and 12 into this project.

Ruggerio et al. (1998) did identify important den structures as rock crevices, snags, red squirrel middens and logs. They concluded that large logs, large snags, and large, live spruce and fir trees are important characteristics for marten den sites in the central Rocky Mountains. Bull and Blumton (1999) looked at effects of fuels reduction treatments on small mammals (prey species). In their study, before harvest the stands had a mature (live) overstory of lodgepole pine, a dense understory of subalpine fir and 40-68 tons/acre of downed wood. The proposed lodgepole pine salvage units in this project are dominated by dead lodgepole pine with sparse understory vegetation and are not similar to stands studied by Bull and Blumton (1999), nor are fuels reduction treatments proposed. This project incorporates Forest Plan direction for snag and downed log retention and is consistent with the referenced literature.

L-17 Comment 66: Native plants are the foundation upon which the ecosystems of the Forest are built, providing forage and shelter for all native wildlife, bird and insect species, supporting the natural processes of the landscape, and providing the context within which the public find recreational and spiritual opportunities. All these uses or values of land are hindered or lost by conversion of native vegetation to invasive and noxious plants. The ecological threats posed by noxious weed infestations are so great that a former chief of the Forest Service called the invasion of noxious weeds “devastating” and a “biological disaster.” Despite implementation of Forest Service “best management practices” (BMPs), noxious weed infestation on the Forest is getting worse and noxious weeds will likely overtake native plant populations if introduced into areas that are not yet infested. The Forest Service has recognized that the effects of noxious weed invasions may be irreversible. Even if weeds are eliminated with herbicide treatment, they may be replaced by other weeds, not by native plant species.

Invasive plant species, also called noxious weeds, are one of the greatest modern threats to biodiversity on earth. Noxious weeds cause harm because they displace native plants, resulting in a loss of diversity and a change in the structure of a plant community. By removing native vegetative cover, invasive plants like knapweed may increase sediment yield and surface runoff in an ecosystem. As well knapweed may alter organic matter distribution and nutrient through a greater ability to uptake phosphorus over some native species in grasslands. Weed colonization can alter fire behavior by increasing flammability: for example,

cheatgrass, a widespread noxious weed on the Forest, cures early and leads to more frequent burning. Weed colonization can also deplete soil nutrients and change the physical structure of soils.

The Forest Service's own management activities are largely responsible for noxious weed infestations; in particular, logging, prescribed burns, and road construction and use create a risk of weed infestations. The introduction of logging equipment into the Forest creates and exacerbates noxious weed infestations. The removal of trees through logging can also facilitate the establishment of noxious weed infestations because of soil disturbance and the reduction of canopy closure. In general, noxious weeds occur in old clearcuts and forest openings, but are rare in mature and old growth forests. Roads are often the first place new invader weeds are introduced. Vehicle traffic and soil disturbances from road construction and maintenance create ideal establishment conditions for weeds. Roads also provide obvious dispersal corridors. Roadsides throughout the project area are infested with noxious weeds. Once established along roadsides, invasive plants will likely spread into adjacent grasslands and forest openings.

Prescribed burning activities within the analysis area would likely cumulatively contribute to increases to noxious weed distribution and populations. As a disturbance process, fire has the potential to greatly exacerbate infestations of certain noxious weed species, depending on burn severity and habitat type (Fire Effects Information System 2004). Soil disturbance, such as that resulting from low and moderate burn severities from prescribed fire and fire suppression related disturbances (dozer lines, drop spots, etc.), provide optimum conditions for noxious weed invasion. Dry site vegetation types and road corridors are extremely vulnerable, especially where recent ground disturbance (timber management, road construction) has occurred. Units proposed for burning within project area may have closed forest service access roads (jammers) located within units. These units have the highest potential for noxious weed infestation and exacerbation through fire activities. **The DEIS did not provide an alternative that eliminates units that have noxious weeds present on roads within units from fire management or logging management proposals in violation of NFMA and NEPA.**

Response – Comment 66

Mitigation measures, project design features, and BMP's are designed to reduce the potential of noxious weed spread. Forest plan monitoring reports (2006-2007) state that BMP's are effective in reducing noxious weed spread.

The Forest has an aggressive noxious weed treatment program. This program, along with monitoring, BMP's, and mitigation, will reduce the potential for spread. As a result of BMP's, monitoring, and mitigation associated with other activities and an aggressive noxious weed control program, infested acres have been reduced in the EDLV project area. Noxious weed inventory in 2000 identified 1,352 acres while the 2010 inventory identified 780 acres. - a 43% reduction of infested acres (See the Invasive Plants section).

Broadcast burning is not proposed in units with noxious weeds. Burning is limited to jackpot burning. Jack Pot burning will not appreciably increase the potential for noxious weed spread due to the fact that burning is prescribed to be completed when soils are moist and/or frozen which reduces soil heating and does not create a hospitable environment for noxious weeds. Additionally, jackpot burning's small footprint can be easily monitored and treated if necessary.

L-17 Comment 67: The EIS did not address the ecological, social and ascetic impact of current noxious weed infestations within the project area. The DEIS says that grazing will benefit from an increase in the amount of grass that will occur after logging but it does not mention the impact on grazing from the increase in weeds that will occur as a result of this project. Please include an analysis of the impact of the actions proposed by this project on the long and short term spread of current and new noxious weed infestations. What treatment methods will be used to address growing noxious weed problems? What noxious weeds are currently and historically found within the project area? Please include a map of

current noxious weed infestations which includes knapweed, Saint Johnswort, cheat grass, bull thistle, Canada thistle, hawkweed, hound's-tongue, oxeye daisy and all other Category 1, Category 2 and Category 3 weeds classified as noxious in the MONTANA COUNTY NOXIOUS WEED LIST. State-listed Category 2 noxious weed species yellow and orange hawkweeds are recently established (within the last 5 to 10 years) in Montana and are rapidly expanding in established areas. They can invade undisturbed areas where native plant communities are intact. These species can persist in shaded conditions and often grow underneath shrubs making eradication very difficult. Their stoloniferous (growing at the surface or below ground) habit can create dense mats that can persist and spread to densities of 3500 plants per square mile (Thomas and Dale 1975). **The EA does not adequately address the issue of weeds in violation of NFMA and NEPA and the Forest Plan.**

Response – Comment 67

See the Invasive Plant section of the FEIS. Past weed control efforts, including spraying by Forest Service crews and contractors, has been successful in limiting the rate of spread and reducing plant density, but has not resulted in complete eradication. The noxious weed inventory in 2000 identified 1,352 acres within the project area while the 2010 inventory identified 780 acres with the project area - a 43% reduction of infested acres.

In the short term, monitoring and treatment of proposed units and disturbed areas will be priority. In the long-term, the Forest has an aggressive and effective noxious weed program within the project area. This program will continue within the project area.

L-17 Comment 68: The EIS does not address the cumulative, direct and indirect effects of the proposed project on weed introduction, spread and persistence that includes how weed infestations have been and will be influenced by the following management actions: road construction including new permanent and temporary roads, and skid trails proposed within this project; opening and decommissioning of roads represented on forest service maps; ground disturbance and traffic on forest service template roads, mining access routes, and private roads; removal of trees through commercial and pre-commercial logging and understory thinning; and prescribed burns.

Response – Comment 68

The analysis includes discussions of direct, indirect and cumulative effects of the project in the Invasive Plants Section.

L-17 Comment 69: The EA does not adequately discuss what open, gated, and decommissioned Forest Service roads within the project area proposed as haul routes have existent noxious weed populations and what methods will be used to assure that noxious weeds are not spread into the proposed action units.

Response – Comment 69

The analysis is being done under an EIS, not an EA. Please reference the Weeds Comparison Map in Appendix D of the FEIs for existing noxious weeds location information. Mitigation measures, project design features, BMP's, and monitoring will reduce the potential of noxious weed spread into proposed units See the Invasive Plants section.

L-17 Comment 70: Noxious weeds are not eradicated with single herbicide treatments. A onetime application may kill an individual plant but dormant seeds in the ground can still sprout after herbicide treatment. Thus, herbicides must be used on consistent, repetitive schedules to be effective.

The EA does not commitment to a long-term, consistent strategy of application is being proposed for each weed infested area within the proposed action area in violation of NEPA and NFMA. The EIS does not discuss what long term monitoring of weed populations is proposed.

Response – Comment 70

This project has been analyzed under an EIS, not an EA. As described in the Invasive Plant section of Chapter 3, noxious weed treatment and annual monitoring will continue within the project area under the 2002 BDNF Noxious Weed Control Program Final EIS and ROD. Past weed control efforts, including Forest Service and contract spraying, have been successful in limiting the rate of spread and reducing plant density, but has not resulted in complete eradication.

L-17 Comment 71: When areas treated with herbicides are reseeded on national forest land, they are usually reseeded with exotic grasses, not native plant species. The EA does not discuss what native plant restoration activities will be implemented in areas disturbed by the actions proposed in this project. The EA adequately discuss howl disturbed areas including road corridors, skid trails, and burn units be planted or reseeded with native plant species (sic).

Response – Comment 71

The analysis is being done under an EIS. Both action alternatives require that disturbed areas that do not naturally revegetate on their own will be re-seeded with a native seed mix as approved by the Forest Service to avoid colonization by noxious weeds as described in descriptions of Alternative 2 and 3 in Chapter 2 –Alternatives Design Features and Mitigations.

L-17 Comment 72: The scientific and managerial consensus is that prevention is the most effective way to manage noxious weeds. The Forest Service concedes that preventing the introduction of weeds into uninfested areas is “the most critical component of a weed management program.” The Forest Service’s national management strategy for noxious weeds also recommends “develop[ing] and implement[ing] forest plan standards . . .” and recognizes that the cheapest and most effective solution is prevention. **The EIS does not adequately discuss which units within the project area currently have no noxious weed populations within their boundaries or what minimum standards are in the BDNF revised Forest Plan to address noxious weed infestations.** The East Deerlodge DEIS did not include an alternative in the that (sic) includes land management standards that will prevent new weed infestations by addressing the causes of weed infestation. **The failure to include preventive standards violates NFMA because the Forest Service is not ensuring the protection of soils and native plant communities. Additionally, the omission of an alternative that includes preventive measures would violates NEPA because the Forest Service failed to consider a reasonable alternative.**

Response – Comment 72

Please see Invasive Plants map in Appendix D which displays 6 units within the project area that contain noxious weeds. The remaining 51 units do not. All alternatives in this EIS include noxious weed control which will continue under the BDNF Noxious Weed Control Program FEIS and ROD (USDA Forest Service 2002). That EIS was developed with alternatives with varying types of treatment and is incorporated in this one.

Yes, if left untreated, noxious weeds have the potential to outcompete natives. Past weed control efforts as discussed in the Invasive Plants Environmental Consequences section including Forest Service and contract spraying, have been successful in limiting the rate of spread and reducing plant density, but have not resulted in complete eradication. Since most noxious weeds produce large numbers of seeds it may take multiple herbicide applications to control an infestation. As a result of BMP’s, monitoring, and mitigation associated with other activities and an aggressive noxious weed control program, infested acres have been reduced in the project area. The noxious weed inventory in 2000 identified past weed control efforts within the project area while the 2010 inventory identified 780 acres with the project area - a 43% reduction of infested acres. Forest plan monitoring reports (2006-2007) state that BMP’s are effective in reducing noxious weed spread. Noxious weeds will be monitored and treated within the project area.

L-17 Comment 73: RARE PLANTS The ESA requires that the Forest Service conserve endangered and threatened species of plants as well as animals. In addition to plants protected under the ESA, the Forest Service identifies species for which population viability is a concern as “sensitive species” designated by the Regional Forester (FSM 2670.44). The response of each of the sensitive plant species to management activity varies by species, and in some cases, is not fully known. Local native vegetation has evolved with and is adapted to the climate, soils, and natural processes such as fire, insect and disease infestations, and windthrow. Any management or lack of management that causes these natural processes to be altered may have impacts on native vegetation, including threatened and sensitive plants. Herbicide application - intended to eradicate invasive plants - also results in a loss of native plant diversity because herbicides kill native plants as well as invasive plants. Although native species have evolved and adapted to natural disturbance such as fire on the landscape, fires primarily occur in mid to late summer season, when annual plants have flowered and set seed. Following fall fires, perennial root-stocks remain underground and plants emerge in the spring. Spring and early summer burns could negatively impact emerging vegetation and destroy annual plant seed.

The EA does not adequately examine what threatened, endangered, rare and sensitive plant species and habitat are located within the proposed project area in violation of the ESA, NEPA, the APA and NFMA. **The standards used to protect threatened, rare, sensitive and culturally important plant species and their habitats from the management actions proposed in this project are inadequate.**

Response – Comment 73

There are no known federally listed threatened or endangered plants on the Beaverhead-Deerlodge National Forest as disclosed in this FEIS, in Chapter 3 Sensitive Plant Section. Surveys were conducted within the project area, targeting potential habitats for both listed and sensitive plants and no federally listed threatened or endangered plant species were found.

The impacts/response of sensitive plants to management activities have been discussed in detail in the sensitive plants section of this document. Most of the sensitive species analyzed could have some long-term benefits from management activities by removing competing overstory cover, creating potentially suitable disturbance habitat, and enhancing the overall vegetation community in restoration units as discussed in further detail in the sensitive plants effects analysis on pages 149-169 in this FEIS.

As discussed in the Sensitive Plants Section in Chapter 3 above, weed species can have long term impacts on sensitive plant species if left untreated and population numbers reach certain thresholds where they out compete natives. In this scenario, invasive exotic plants have the potential to make occupied and/or potential habitats unsuitable for sensitive plant species. The prevention and subsequent control of weeds through various means can benefit sensitive plants by reducing invasive species from their habitats.

Weed control activities authorized under the 2002 Noxious Weed Control ROD are ongoing within the project area, but are not known to be posing any negative impacts to sensitive plants or the native vegetation community within the project area as populations of the existing infestations are small, and total only 780 acres within the project area. Using an integrated pest management approach, between 2000 and 2010, weed infestations were treated and reduced by 43% over the ten year period (See Invasive Plants Section). This data suggests that fewer acres need treatment with herbicides each year as infestations decrease, and therefore the potential negative effects of noxious weed infestations on native plants including sensitive plants is being reduced concurrently.

Spring burning would occur when soil moisture is high, resulting in little impact if any to the duff layer, let alone the subterranean root structures of potential sensitive plants. As noted in the comment, these plants evolved with fire. Although natural fire may have been more likely to occur during late summer or fall months in the past, spring burning poses even less of a likelihood to affect the potential sensitive plant populations and habitat because of the low severity nature of these burns. The impact to

annual plant seed is mentioned, however only one sensitive plant analyzed in the FEIS is an annual; Austin's knotweed. It occurs in sparsely vegetated locations that would not likely carry fire.

An updated analysis for sensitive plants has been included in the Sensitive Plant Section in Chapter 3.

L-17 Comment 74: WHITEBARK PINE Not all ecosystems or all Rocky Mountain landscapes have experienced the impacts of fire exclusion. In some wilderness areas, where in recent decades natural fires have been allowed to burn, there have not been major shifts in vegetation composition and structure (Keane et al. 2002). In some alpine ecosystems, fire was never an important ecological factor. In some upper subalpine ecosystems, fires were important, but their rate of occurrence was too low to have been significantly altered by the relatively short period of fire suppression (Keane et al. 2002). For example, the last 70 to 80 years of fire suppression have not had much influence on subalpine landscapes with fire intervals of 200 to several hundred years (Romme and Despain). Consequently, it is unlikely that fire exclusion has yet to significantly alter stand conditions or forest health within Rocky Mountain subalpine ecosystems.

Whitebark pine seedlings, saplings and mature trees, present in subalpine forests proposed for burning, would experience mortality from project activity. Whitebark pine is fire intolerant (thin bark). Fire favors whitebark pine regeneration (through canopy opening and reducing competing vegetation) only in the presence of adequate seed source and dispersal mechanisms (Clarks Nutcracker or humans planting whitebark pine seedlings).

White pine blister rust, an introduced disease, has caused rapid mortality of whitebark pine over the last 30 to 60 years. Keane and Arno (1993) reported that 42 percent of whitebark pine in western Montana had died in the previous 20 years with 89 percent of remaining trees being infected with blister rust. The ability of whitebark pine to reproduce naturally is strongly affected by blister rust infection; the rust kills branches in the upper cone bearing crown, effectively ending seed production.

Montana is currently experiencing a mountain pine beetle epidemic. Mountain pine beetle prefer large, older whitebark pine, which are the major cone producers. In some areas the few remaining whitebark that show the potential for blister rust resistance are being attacked and killed by mountain pine beetles, thus accelerating the loss of key mature cone-bearing trees.

Whitebark pine seedlings and saplings are very likely present in the subalpine forests proposed for burning and logging. In the absence of fire, this naturally occurring whitebark pine regeneration would continue to function as an important part of the subalpine ecosystem. Since 2005, rust resistant seed sources have been identified in the Northern Rockies (Mahalovich et al 2006). Due to the severity of blister rust infection within the region, natural whitebark pine regeneration in the project area is prospective rust resistant stock.

Although prescribed burning can be useful to reduce areas of high-density subalpine fir and spruce and can create favorable ecological conditions for whitebark pine regeneration and growth, in the absence of sufficient seed source for natural regeneration maintaining the viability and function of whitebark pine would not be achieved through burning. Planting of rust-resistant seedlings would likely not be sufficient to replace whitebark pine lost to fire activities.

The EIS does not show that surveys have been conducted to determine presence and abundance of whitebark pine re-generation or if (sic) whitebark pine seedlings and saplings are present, what measures will be taken to protect them. The East Deerlodge project should have included an alternative that excludes burning and logging in the presence of whitebark pine regeneration (consider 'Daylighting' seedlings and saplings as an alternative restoration method).

Response – Comment 74

Please see the updated Sensitive Plants and Vegetation sections of the FEIS for a full discussion of the existing condition and potential effects to Whitebark Pine. Mitigation and Design Features are included in both action alternatives to protect Whitebark Pine.

L-17 Comment 75: I am attaching a copy of our appeal of the revised Forest Plan because **we believe the revised Forest Plan violated NFMA.**

Response – Comment 75

Thank you for attaching a copy of your appeal on the Forest Plan, we also have a copy on file. None of the appeal points raised in your appeal were affirmed by the Appeal deciding officer, rather, all were denied.

Letter 18. EPA, Region 8, Montana Office (DalSoglio)

R8 EPA Comment 1: We are pleased that the revised analysis of sediment delivery to streams predicts a 50% reduction in road sediment delivery to streams in the Peterson Creek subwatershed (listed by the State of Montana as water quality impaired under Section 303(d) of the Clean Water Act). We are also pleased that actions to address sediment production and transport to Peterson Creek will be required in the Stewardship Contract and given funding priority. Although the RDEIS also indicates that the additional timber volume harvested with Alternative 3 may not increase the number of stewardship projects that can be implemented (e.g., road improvements). Accordingly, while we are pleased that restoration projects have been prioritized and will be required in the 303(d) listed Peterson Creek drainage, we are also concerned that other restoration actions to address water quality problems do not have assured funding (i.e. they can only be carried out as KV funds, grants, partnerships, and (as) appropriated funding becomes available.

Response – Comment 1

Please see the updated Hydrology Section of the FEIS for updated sediment analysis including predicted changes to sediment delivery from implementation of the action alternatives.

R8 EPA Comment 2: Table 13 comparing effects of alternative shows that Alternative 3 would reduce overall short-term and long-term sediment loads from roads by 1,668 and 1,838 lbs/year respectively, in comparison to Alternative 2: and also shows that overall long-term sediment loads from roads would decrease by 4,024 lb/year in comparison to the no action alternative over the long term. Table 13 also shows that sediment loads would increase by 6,307 lbs/year in comparison to no action over the short-term.

Major decreases in sediment loads from roads results from road maintenance along Jack Creek; removal of FR 19870; replacement of two road stream crossings along Dieders Fork; and removal of the UR8-75 road). Also a significant portion of Dry Cottonwood Creek Road (FR 85) that runs along Dry Cottonwood Creek would not be used as a haul route under Alternative 3 to reduce sediment delivery to Dry Cottonwood Creek, with log haul instead occurring on FR 8455. It is also stated that additional road closures, culvert removals, obliterations, and route re-designations will be considered in the future.

We appreciate that additional information provided in the RDEIS regarding aquatics monitoring (e.g. USFS has monitoring sites on Orofino, North Fork Dry Cottonwood, Dieders Fork Peterson, and Dry Cottonwood Creeks that are monitored once every five years: and has four PACFISH/INFISH Biological Opinion (PIBO) monitoring sites within the project area, Cottonwood Creek, North Fork Dry Cottonwood Creek, Orofino Creek, and Perkins Gulch that are also monitored on a five year interval).

The RDEIS indicates that while Alternative 3 adds harvest in some areas it also reduces harvest in other areas due to resource concerns identified during further on-the-ground analysis (e.g., areas known to have old growth characteristics have been excluded, as well as areas with steep slopes, access, or soils concerns). We are pleased that the updated analysis indicates that all harvest units would meet Region 1 Soil Quality Standards in terms of erosion (typically less than 102 tons/ac/yr), and the revised assessment of sediment delivery estimates that sediment delivery from timber harvest units to streams including Peterson Creek, will be negligible. **We continue to recommend, however, that less damaging timber harvesting methods (such as logging during winter on snow or frozen ground, or cable logging) in timber units that have greater potential to deliver sediment to streams be considered (e.g., units 24T and 29T).**

Response – Comment 2

Logging during the winter on dry or frozen ground is included as a project design feature/mitigation measure for timber units with resource concerns. Cable logging is an option described under Alt 3, Treatment in Timber Units Design Features and Mitigation. Also see changes draft to final at the beginning of the Recreation section in Chapter 3. Winter logging was added to Alt 3 specifically to address timber units that may not sufficiently dry out in the summer and timber units that have existing detrimental soil disturbance. Winter logging of timber units due to sediment delivery concerns were not included in the project design features/mitigation measures due to the low probability of occurrence and predicted sediment yield. All timber units have less than 10% probability that erosion will occur following harvest. The highest percent probability of erosion occurring in the first year following harvest is 8% on Unit 42T. Generally, for all harvest units, the probability of erosion would decline every year following harvest due to natural vegetative regeneration. Model results indicate an average annual erosion rate of 0.004 to 0.06 tons/ac/year for those units with a probability of erosion. The predicted sediment delivery is even less. All timber units have less than 10% probability that sediment delivery will occur with the highest percent probability being 6%. Model results indicate an average sediment delivery rate of 0.0 ton/ac/year for all timber units due to the location of units being a far distance from any live water.

R8 EPA Comment 3: Additional tree felling in riparian areas is also proposed with Alternative 3. The RDEIS identifies riparian tree felling among the proposed “restoration actin.” We often have concerns about timber harvest within riparian areas due to potential adverse effects to riparian and aquatic habitat and functioning and stream water quality and stability (e.g., potential for increased sediment transport to streams, reduction in vegetative buffer filtering of sediment, loss of stream shading, loss of woody debris recruitment for streams, impacts to streambank stability, etc.). The RDEIS indicates that riparian tree felling is for the purpose of removing dead and dying lodgepole pine and using felled trees to create barriers to reduce livestock accessibility and riparian and stream bank trampling impacts. We also recognize that in site-specific situations harvest/removal of conifers that encroach on riparian areas may open up such areas to allow growth of dense woody shrub vegetation in riparian area that improve riparian habitat and functioning and stream stability and water quality. **However, we did not see much discussion of riparian harvest trade-offs and the overall effects of additional riparian stream harvest in the RDEIS.**

It would be helpful if the FEIS further discussed all the potential impacts of proposed riparian tree felling to verify that overall benefits of riparian harvests outweigh potential adverse effects, and that additional riparian tree felling would not adversely affect riparian habitat and functioning and/or stream water quality or aquatic habitat (i.e., discuss woody debris recruitment, stream shading, sediment production/transport, vegetative filtering of sediment, vegetative bank stabilization).

Response – Comment 3

We expect disturbance and the effects associated with these restoration actions would be nominal. Livestock grazing impacts are somewhat more impactful to the stream segments proposed for these riparian treatments and because they are continuous; any short term effects related to the restoration actions would be far outweighed by the long term benefits of limiting livestock impacts.

R8 EPA Comment 4: Finally we note that new Alternative 3 excludes vegetation treatments in units that contain old growth. We support protection of old growth habitat, since . . . is ecologically diverse and provides good breeding and feeding habitat for many bird and animal species, and much old growth habitat and native, late-seral overstory trees have already been lost. Although while we support efforts to avoid continued loss of old growth habitat, it may be relevant to note that we do not oppose thinning from below treatments and/or prescribed burning in old growth stands for the purpose of reducing fire risk and providing longer-term wildfire protection while protecting and maintaining old growth habitat characteristics. Careful prescribed burning in old growth stands can reduce fuel loads and fire risks, and thus, may promote long-term protection and sustainability of old growth stands.

Response – Comment 4

Thank you for supporting the Design Criteria for Treatment in Restoration Units for Alternative 3.

A total of 94 acres of old growth stands are included in the Douglas-fir commercial thin treatments in Alternative 2. These acres would meet minimum criteria for old growth after treatment and would be consistent with the Forest Plan Vegetation Standard 1 which permits mechanical vegetation treatments in old growth. Old growth is defined using the minimum criteria described in Green et al., errata corrected 2008. The vegetation section discloses the pre- and post- treatment minimum criteria conditions of each proposed unit, and that the post treatment conditions would still meet the criteria of old growth. There are no proposed activities in old growth in Alternative 3 - management activities will not affect old growth.

R8 EPA Comment 5: Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the propose action and alternatives in an EIS. The RDEIS has been rated as Category EC-3 (Environmental Concerns - Insufficient Information). A copy of EPA's rating criteria is attached. The EPA is supportive of the project purpose and need to address forest restoration needs affected by an ongoing mountain pine beetle epidemic, and we are pleased that additional aquatic restoration activities are included in Alternative 3. **However, there is still some concern regarding short term adverse effects of proposed actions, and adequacy of funding to carry out all proposed restoration activities and we believe additional analysis and disclosure regarding potential impacts of riparian tree felling should be provided.**

Response – Comment 5

Please see the updated Hydrology and vegetation sections of the FEIS for additional information on effects of the alternatives. Additionally, please see the clarified Alternative descriptions in Chapter 2 where certain actions have been clarified as serving as mitigations. As such these actions are required to be completed during timber sale activities. Funding for both the mitigations as well as the non-mitigation actions (restoration actions) will come from a variety of sources and be implemented through a variety of mechanisms.

Letter 19. NEC (Johnson) and AWR (Garrity)

L-19 Comment 1: . . . The following comments are based in part by visits to the Project Area by Sara Johnson on the Forest Service field review on October 23, 2009 and a personal visit on August 26, 2011.

NEC and AWR would both like to request a “hard copy” of the Record of Decision when it is released in a final decision.

Response – Comment 1

Printed copies of the FEIS and DROD were sent to both NEC and AWR per this request.

L-19 Comment 2: Size of the Analysis Area: Many references in the RDEIS cite the Clark Fork Flint Landscape. This landscape includes the East Deerlodge Management Area (MA) of 47,543 acres, the Flint Foothills MA of 101,252 acres, the Flint Uplands MA of 134,611 acres, the Georgetown Lake MA of 38,035 acres, the Harvey Creek Foothills MA of 30,031 acres, the John Long MA of 14, 289 acres, and the Warm Springs MA of 51, 482 acres. This totals 417,243 acres. This size of an analysis area washes out any local effects in, including in the East Deerlodge MA. This MA encompasses only 11% of the analysis area. The Forest’s MIS, elk, has an average individual home range size of about 10,000 in Montana, with an average size of 3525 acres during the summer. Even use of the East Deerlodge MA will not measure impacts on summer elk habitat, including habitat effectiveness. We request that the summer habitat effectiveness as per the current best science cited in the Revised Forest Plan (RFP) by Christensen et al. 1993 be evaluated at the 6th code watersheds in the East Deerlodge MA. We also request that this analysis include ALL motorized routes and motorized trails that will have motorized activity during the summer season at the present time, during project activities, and after project completion. We also request that fall elk security as defined by the current best science (Christensen et al. 1993 and Hillis et al. 1991) be provided for the East Deerlodge MA during the fall before, during, and after project completion. As with habitat effectiveness measures, we would like this analysis to include any and all motorized (sic) routes that will have motorized activity of any type during the fall season. Please use the complete definition of “security” which is 250 acres of contiguous forest cover at least 0.5 miles from an open road, as per the current best science.

Response – Comment 2

Please refer to the FS response in Letter 17, Comment 35 above regarding road density, elk, and the use of best available science in this analysis.

L-19 Comment 3: It is not clear how the road impacts of temporary roads and roads that are currently closed to any motorized activities were measured in the RDEIS. Please clearly state whether disturbances from logging activity and other Forest Service activities (contracting, etc.) are included as a disturbance factor in road and trail use, since it is claimed at 457 and 421 that there will be an increase in OMRTD. Does this refer to during, or after, the Project? If it refers to activity during the project, how can this be, unless only public motorize activity counted as an “open road.” Since this does not represent the current best science, an accurate measurement of open road density including all open roads needs to be provided. Also, please include a table of information that identifies which currently-closed roads and illegal routes will be used for the Project. For example, the DEIS at 453 notes that currently-closed roads will be required to access units 42T, 3T, 74T, 75T, 76T, and 84T. And no response to our earlier comments on the overall road management was provided. Please make it clear exactly how many miles of road of each type are currently in place, how these roads will change during project activity, and what road management for each will be after project completion. That way the public can understand how the current road density will change with long-range motorized route planning.

Response – Comment 3

The statement in the Revised DEIS carried forward in this FEIS in the Spatial and Temporal Context section under Wildlife Habitat says, “The analysis also includes disturbance effects due to increased traffic, human activity, and equipment use during project activities.”

Impacts of roads vary, and for wildlife purposes, were presented by species and alternative. The table presents analysis of elk disturbance in specific timber units from logging (to implement the proposed vegetation treatments). It discusses impacts from logging in summer and winter, as well as rationale why a seasonal restriction, if any, was placed on logging. It also includes discussion on designated open roads vs. temporary roads if applicable. Note that the OMRTDs are maintained through both alternatives.

More information on project roads is presented in the Transportation section with a complete list of each route proposed for use in the EDLV project. We feel this information meets your request to display exactly how many miles of road of each type are currently in place, how these roads will change during project activity, and what road management for each will be after project completion.

L-19 Comment 4: The expected public use of roads for firewood harvest, including in slash piles, is unclear. If an open road only counts if public use occurs, how is the firewood harvest going to be analyzed as per OMRAD?

Response – Comment 4

Firewood gathering will take place during and after the project under existing guidelines for personal firewood gathering. That activity is taken into account under Past Present and Forseeable Actions and Cumulative Effects discussions in: Fire and Fuels, Recreation, Scenic Resources, Transportation, Vegetation and Wildlife sections. Please see the updated Wildlife Section of the FEIS for a discussion of how OMRTDs and wildlife security were calculated.

L-19 Comment 5: Hiding Cover: Please provide the current levels of hiding cover within each 6th Code watershed for the Project and define what this will be after project completion for elk, the MIS for the Project. Please follow the current best science for the definition of hiding cover which requires a minimum width of 600 feet for elk.

Response – Comment 5

As mentioned in the response in L-17 Comment 27 (above) numerous more recently published studies have found that open motorized roads and trails are the greatest consideration on summer range relating to habitat effectiveness. Furthermore, these studies corroborate some aspects of Christensen et al. (1993) who directly equates habitat effectiveness to road density recommending and concluding that open road density and season of use is a primary elk vulnerability consideration, as hunting is the primary source of elk mortality.

Christensen et al. (1993) notes detailed analysis of hiding cover components are not considered as essential as they were in the past and that a more meaningful approach to cover analysis includes maintenance of security, landscape management of coniferous cover and monitoring elk. Additionally, cover unit size, patterns on a landscape basis, connectedness with other cover, the amount available to elk and known use patterns by elk should be considered. Security areas and patterns on the landscape within the project area were discussed in the RDEIS and updated in the FEIS. Additionally, elk use patterns were discussed with MTFWP and this was updated in the FEIS. All of these items were updated following direction in Christensen et al. (1993) to recognize the project in a broader context with larger scale perspectives, further supporting the size of the effects analysis area that was used in the analysis for this project. There are six USGS 6th code HUC subwatersheds that occur in the EDLV project area. Using a small 6th code HUC scale to analyze effects to elk, as recommended in this comment, would be going against the appropriate scale (30,000-150,000 acres) recommended in Christensen et al. (1993).

L-19 Comment 6: Thermal Cover: The RDEIS notes that thermal cover is not important and was not addressed (Page 675). The research in southwest Montana where forest cover is limiting was never cited to support this claim. This research needs to be identified, since it conflicts with the current best science

for Montana as per the Elk Logging Study and Christensen 35 al. 1993. Please identify the acres of winter range in the Project Area. On these winter ranges, please define the current level of thermal cover for elk, or stands at least 40 feet in height and at least a 70% canopy cover. Please define what the thermal cover level will be after project completion.

Response – Comment 6

Please refer to the response in Letter 17, Comment 27 (above) regarding thermal cover and road density recommendations for elk. Acres of winter range were identified in the RDEIS. In this Final EIS, Wildlife Habitat, updates to the winter range information and analysis is included in the FEIS.

L-19 Comment 7: Winter Range Management: Motorized activity on winter range was not clearly defined in the RDEIS. Please define the winter open motorized routes on winter range by 6th Code watersheds, so that local impacts can be defined during this critical period.

The RDEIS infers that the project will improve elk habitat, including on the winter range. However, the basis for this claim is unclear. Please define currently how this winter range is being used by elk, since each winter range is known to have specific individual qualities. Why is there too much thermal cover? What level of thermal cover is considered excessive for this winter range? What is the goal for thermal cover with this restoration project? What specific science is the claim based on that thermal not important on winter range (RDEIS 448).

Response – Comment 7

Please refer to the extensive response to L-17 Comment 35 (above). Winter range for elk was discussed in the RDEIS and is carried forward in the Wildlife section of the FEIS.

L-19 Comment 8: The RDEIS notes at 450 that 30% of the commercial harvest units will occur on big game winter range, while at 456 it is noted that 40% of the commercial harvest will occur on winter range and that these constitute improvements and restoration. What **the specific habitat problem for this winter range** is, however, **was never identified, or how this was determined**. The public needs to know what the problem is and why logging will correct this problem.

There will be extensive clear cutting on the winter range, such as units 5T, 6T, 22T, 23T, 24T, 45T, 57T, 61T, 67T, and 68T. Why will this clearcutting improve big game winter range? **What specific studies in southwestern Montana have been done to show clearcutting benefits big game winter range? Please don't cite studies from other areas where forests are much more extensive, such as in Idaho.**

Response – Comment 8

Dead and dying lodgepole units don't currently provide essential habitat. Impacts to elk from winter logging in 8 units under Alternative 3 (the units logged in the winter in mapped winter range) are analyzed in detail in the FEIS.

Currently, these stands proposed for salvage are dead and dying. Salvage logging in lodgepole pine has been shown to stimulate the production of understory vegetation for an estimated 20 or more years, providing forage for elk (Light and Burbridge, 1985) .

The State Elk plan is the most local information for elk in this project area. The Elk Plan (MFWP 2004) states that as much as 70% of the winter range used at that time occurred on private lands - which are mostly open, low elevation grasslands and riparian areas that receive the least amount of snow. In Cook et al 2005, elk in the dense forest stands lost the most weight and mass further supporting the reason cover was not analyzed in detail and not considered a desirable variable in elk winter range.

L-19 Comment 9: The RDEIS claims that the 9 clearcuts on big game winter range that will be over 40 acres will not affect big game winter use. The rationale for clearcutting this big game winter range was never provided. Since the current best science indicates that removal of cover adjacent to grassland winter ranges in Montana are detrimental to elk, it is not clear why large clearcuts, including those several hundred acres in size, will benefit elk winter range. Please cite the specific science where this was shown to be the case on southwestern Montana. Why won't large clearcuts be a barrier to overall winter range use due to the lack of cover? Why won't the build-up of snow in clearcuts prohibit elk and deer movements, as well as bury forage?

Response – Comment 9

Elk use open areas and the size of openings would not affect winter use. The increase in snow is not expected to occur as these areas are already low-snow areas and the dead trees to be removed are not currently intercepting snow (loss of needles and small branches).

L-19 Comment 10: Also the rationale for removing conifers in restoration units, such as units 8, 9, 11, 13, 1114, to improve winter range (RDEIS 448) was never provided. The RDEIS at 453 notes that 50% of the commercial harvest associated with restoration will occur on winter range. Why are there too many trees on this winter range, and how was this determined? What data is available that forage is limiting? This idea conflicts with many other claims in the RDEIS that elk are exceeding the MTFWP objectives for this population. Also, if forage is limiting on the winter range, why isn't the current level of livestock grazing being addressed? It appears that there is some conflict between elk and livestock as the RDEIS at 452 notes that increased forage from logging will reduce competition between elk and livestock.

Response – Comment 10

Forage is not limiting for elk in this HD. The purpose and need of treating these units is not to specifically increase forage as the commenter implies. In the grasslands and shrublands, the effects of removing conifers around the edges would maintain these winter habitats and also increases grasses and forbs. These treatments would increase available forage on winter range.

L-19 Comment 11: There is no assessment of how winter logging on winter range will affect elk. The costs of winter disturbances are noted to be high as per the current best science. How were these detrimental impacts considered in the decision to winter log? Why weren't there any alternatives not to log areas on the winter range if it required winter logging? Was this even considered?

Response – Comment 11

Effects to winter range from winter logging are analyzed in the Wildlife section – Alternative 3 Direct, Indirect, Cumulative effects to Elk. Alternative 2 does not include winter logging so as to compare the effects of both winter logging and not winter logging.

L-19 Comment 12: Elk Calving: The RDEIS notes that calving areas were not mapped (675). Since elk is the only MIS that occurs in the Project Area, why isn't this sensitive area identified? Please map the average range of elk calving habitat in the Project Area. Please define how logging activities that begin June 15, right at the end of the calving season, will not create losses of elk calves due to disturbance. What type of protection of calving habitat is considered necessary to promote reproductive success of these MIS? What calving areas will have open roads through them in June? In addition, it is not clear why removal of trees in calving areas is beneficial. What are the criteria for calving habitat, and how will these be affected by the project?

Response – Comment 12

Calving season generally runs from mid-May through mid-June. Because of restrictions during the spring for spring breakup, no commercial treatments would occur during this season so no effects to elk calving are expected.

These calving dates correspond to adequate protection of elk according to MTFWP

L-19 Comment 13: Old Growth: Defining old growth by the 417,243 acre Clark Fork Flint LA is meaningless. The RFP states that old growth will be well distributed across the Forest. **Please define what “well distributed” means as per area of landscape** it should (sic) occur, **since the agency challenges our contention that old growth is required at least every 10,000 acres to qualify as “well distributed.”** This would ensure that old growth is available for the former MIS the goshawk, which has an average territory size of 6,000 acres of lower elevation habitat.

Response – Comment 13

Old growth forests are distinguished by old trees and highly developed structural characteristics. They are an important part of forest biodiversity providing specialized wildlife habitats and aesthetic and recreational values. While some wildlife species present in the BDNF have a preference for old growth during portions of their life cycles or have a preference for mature forests with complex structure, there are no known old growth obligate species on BDNF lands within the analysis area.

Based on FIA data, the Clark Fork-Flints landscape has approximately 21 percent old growth across all forest types (Bush et al. 2006). Based on an inventory of the units, some Timber Units in the EDLV project area were identified in the DEIS as having some old growth characteristics (3T, 16T, 25T, 33T, and 34T). Information from walk-thru surveys indicates that additional Units (16T, 18T, 21T, 25T, 39T, 40T, 53T and 84C) had old growth in portions of the units (see Vegetation Report).

Under Alternative 2, there are a few units that include areas of old growth. In the Douglas-fir old growth type, approximately 94 acres would be treated; in the lodgepole pine old growth type approximately 56 acres would be treated. However, based on mortality in the units, the majority of large-diameter lodgepole pine are dead and the stands in the lodgepole pine old growth type no longer meet the requirements for old growth. There are no proposed activities in old growth in Alternative 3.

In the lodgepole pine units, retention of minimum old growth characteristics would not be possible because these units no longer meets the criteria to be old growth due to the heavy mortality. For example, in Unit 40, there was 80% mortality noted during walk-thru surveys with only 140 live trees per acre in the 9-15” dbh category (none larger); this is not enough to meet the 150 live tree per acre minimum. Overall, there are not enough large live trees to provide old growth habitat characteristics in lodgepole pine units. See the Vegetation Section for more information on old growth treatments.

There are no old growth dependent species on the Forest, but there are species that will use old growth because of the structural complexity, closed canopies, large-diameter trees or other features such as the flammulated owl and fisher. Based on retention of minimum old growth characteristics (age and number of large trees and basal area), it is expected that treated Douglas-fir units would continue to provide this habitat.

L-19 Comment 14: The level of old growth within the Project Area needs to be defined by acreage and location. The RDEIS notes there has not been a complete inventory for the project (at 310, 680). It is unclear why old growth management is not important. If there is inadequate old growth as per this local landscape, restoration of old growth clearly needs to be completed. The restoration needs for this project are clearly arbitrary, as old growth was not included. **Why wasn’t old growth included in the assessment for restoration?**

Response – Comment 14

The BDNF has not seen a reduction in old growth. Since well over 20 percent of the forested vegetation type is currently in old-growth, no restoration need has been identified. With almost 50 percent of the forest in a roadless or wilderness condition and road densities around 1.5 miles per square mile, the BDNF has not identified restoration needs that other forests may have.

L-19 Comment 15: Although the proposed action (Alternative 3) will not harvest old growth, supposedly, the rationale for harvesting old growth in alternative 3, is irrational. It is noted that snags are not required in this old growth as per the minimum criteria by Green et al.

The claim that no old growth will be logged is never supported. The RDEIS at 683 notes that the average age of lodgepole pine in the Project Area is 140 years, which means it qualifies as old growth as per Green et al. 1991. The assumption that all the proposed lodgepole pine stands currently lack at least 12 green trees per acre over 10 inches dbh was never verified in the RDEIS. It is possible that all the lodgepole pine clearcuts will remove old growth. Please provide the documentation and inventory for each proposed clearcut in lodgepole pine to demonstrate it lacks 23 trees per acre over 10 inches dbh.

Response – Comment 15

The DEIS mentions 140 years old lpp in only two places and makes no mention of logging old growth. At pg. 66 " In the mixed-severity fire regime, lodgepole pine is generally short-lived and fast growing for 60 to 80 years but then loses vigor becoming vulnerable to mountain pine beetle. The average age of the lodgepole pine in the project area is 140 years. Historically, stand replacement fires at intervals between approximately 35 and 100 years perpetuated an ever-changing landscape mosaic of young, middle-aged, and old communities that tempered the extent and severity of bark beetle epidemics. Implementation of the Proposed Action would serve to shift the FRCC to a 1 only in treated timber sale units that are currently FRCC 2 or 3. . . ." It goes on to talk about fire condition classes.

The second is at page 188 under Affected Environment, Forested Vegetation discussion of Basal Areas. The relevant paragraph says:

"The distribution of BA measurements across Timber Units in the project area is shown in fig. 46. BA in lodgepole pine stands averages approximately 160 ft²/ac. Average BA and age in the 15+ inch DBH class are approximately 15 ft²/ac and 180 years, respectively, with Douglas-fir as the most frequent dominant species across units. For the 9-15 inch DBH class, average BA and age are approximately 80 ft²/ac and 140 years, respectively, with lodgepole pine as the dominant species. In the 5-9 inch DBH class, average BA and age are approximately 70 ft²/ac and 130 years, respectively, also with lodgepole pine as the dominant species. Volume and age estimates are given for each Timber Unit in the Silviculture Report."

Under Alternative 3, there would be no salvage, thinning, or other treatment activities in areas found to have old growth characteristics; should any old growth be found during project implementation, these areas would be excluded from harvest activities. See Changes Draft to Final.

Please see the responses to Letter 17 Comment 3, parts U, V, W, and Y, as well as the response to Letter 18, Comment 4.

You note Green et al. correctly except that research paper was updated to 1992, errata corrected 2008. And yes, it still does not require snags in any of the old growth types.

Snags are an associated structural characteristic that may be useful in decision-making in marginal cases or in comparing relative resource values when making old growth evaluations. Associated characteristics are meant to be guidelines in evaluating stands. A stand should not be accepted or rejected as old growth simply on the basis of associated characteristics (Green et al. 1992, errata corrected 2008). Forest Plan Snag Standards will be adhered to in all alternatives.

None of the analysis documents say we plan to log old growth. Alternative 2 proposes 94 acres of treatment in old growth, but the old growth itself would not be harvested. The Vegetation Standard 1 says we will not reduce the age and number of large trees and basal area below the 'minimum criteria' required for Eastern Montana old growth in Green et al. (1992, errata corrected 2008). In addition, "old growth is not necessarily 'virgin' or 'primeval'; old growth could develop following human disturbances" (Green et al. 1991). The Green et al. description of lodgepole pine old growth is 12 trees (not 23) over 10 inches dbh per acre, with the minimum age of those large trees being 150 years old, not 140.

Under Alternative 2, treatments in old growth stands would not reduce the age, number of large trees, or basal area below the 'minimum criteria' required for Eastern Montana old growth, as described in Standard 1 for Vegetation in the Forest Plan.

Snag inventories outside of the proposed treatment units were not conducted; however, of the 17,937 acres identified as lodgepole pine, approximately 16,000 acres (90 percent) are dead and currently available for snags.

This proposal would reduce the acres available for snags by about 2,000 acres (approximately 12 percent of the dead and dying lodgepole pine); however, the acres treated would meet the Forest Plan standards for snag retention by leaving the remaining 15,000 acres (88 percent) of dead and dying lodgepole pine type in the EDLV project area. A 2008 landscape assessment report for EDLV compiled from field data collection states the mortality even at that time was 70-99 percent in lodgepole pine stands with trees greater than 7 inches dbh (Schuelke 2008). More trees have been successfully attacked in successive years, down to as small as 4 inches dbh .

No proposed salvage activities in old growth or potential old growth stands would occur. Surveys in units did not find old growth meeting the minimum criteria (Green et al., errata corrected 2008) in the salvage units, principally due to the mortality caused by mountain pine beetle. Because no treatment is proposed in old growth stands, no old growth would be affected by salvage harvest treatments.

L-19 Comment 16: Please define all the wildlife species that benefit from old growth in various ways, including undisturbed older forest habitat with abundant snags, high decadence of standing and downed logs, abundant insects for food, high conifer cone production, and low fragmentation. There are over a dozen Montana wildlife species that are highly dependent upon older forest conditions, including Montana Species of Concern. The RDEIS failure to evaluate project impacts on these species, including past logging, is a clear violation of NEPA, the NFMA, and the APA. Wildlife species that would interfere with production of commercial timber were ignored in the analysis.

The RDEIS cites several studies supporting the contention that logging old growth will not impact wildlife. The specific studies, however, were never identified (page 428). Please cite these references.

Response – Comment 16

Please refer to the response to Comment 13. The studies referred to on page 428 of the RDEIS are included in Bollenbacher et al 2008 which was carried forward in this final document. It is important to note, under Alternative 2, there are a few units that include areas of old growth, however based on mortality in the units; the majority of large-diameter lodgepole pine are dead and the stands in the lodgepole pine old growth type no longer meet the requirements for old growth. There are no proposed activities in old growth in Alternative 3. Seven units were removed under Alternative 3 because they contained old growth. See Changes Draft to Final under Vegetation.

L-19 Comment 17: Please include an analysis of the pine marten, a fur bearer that indicates forest interior habitat for many other species. The mountain pine beetle will improve habitat for this species with increased downed logs and understory development as the overstory deteriorates. How much of the

area is currently suitable, and how much would be suitable with the no action versus the action alternatives? Also, please cite the science that demonstrates that the coarse woody debris requirements in the RFP address pine marten habitat needs.

Response – Comment 17

Pine marten are ranked G5 (common, widespread and abundant locally) and S4 (populations apparently secure in the state) by the Montana Natural Heritage Program. There are not on the State's Species of Concern list and are not considered to be at risk. The Forest Plan ensures viability for wildlife, including pine marten, through application of Forest-wide goals, objectives and standards. Forest Plan direction ensures management of a variety of habitats in various successional stages so as to ensure viability of a variety of species associated with those different habitats.

Ruggerio et al. (1998) identifies important den structures for this species as rock crevices, snags, red squirrel middens and logs. They considered that large logs, large snags and large live spruce and fir trees are important characteristics for marten densities in the central Rocky Mountains. This project incorporates Forest Plan direction for snag and downed log retention.

L-19 Comment 18: The agency claims that the NFMA does not require an MIS for every habitat on the Forest. However, the purpose of MIS is to measure the impacts of management activities. Since the Project will clearly impact extensive areas of current or developing old growth, an MIS is needed. In addition, the RFP also demonstrates that developing old growth and current old growth will potentially be severely impacted by plans to clearcut and commercial thin forests. There is no doubt that an MIS for old growth is required to measure project impacts and forest viability of many associated and/or benefitted species. These species are threatened not only by implementation of the FRP, but as well locally by the EDLV project, and these impacts will not even be assessed as there is no MIS of old growth on the BDNF.

Response – Comment 18

Please refer to the response to your Comment 13 above.

L-19 Comment 19: The RDEIS at 384, 450, 459 (sic) notes that there will be fewer to no logs in clearcuts other than the few required by the RFP. However, there is no discussion on how this long-term loss of logs, or coarse woody debris, will affect wildlife. Since this is a restoration project, it is unclear why the elimination of large quantities of coarse woody debris represents “restoration” of this ecosystem. Please explain why this is considered a benefit.

Response – Comment 19

The units identified for lodgepole pine salvage are not considered restoration units. Restoration units are defined in the glossary and discussed at length in Alternative 2 and 3.

L-19 Comment 20: Aspen Management: It is clear there is a severe problem for aspen due to livestock grazing. This is obvious from field trips to the project area, as well as is noted in the RDEIS. Yet in this restoration project, there is no discussion of why livestock grazing levels should not be reduced. This would restore the landscape to historical conditions. Once again, the selection of restoration needs for this project are clearly very arbitrary. If they did not involve the production of commercial timber, they were never developed.

The limited mitigation measures proposed, worm fencing, and jack-strawed trees are noted to be relatively ineffective. So the project will actually promote the demise of aspen by encouraging sprouting with tree thinning, but then allowing livestock to destroy sprouts.

There clearly needs to be an alternative that addresses the need to protect aspen from livestock grazing. Since the purpose of the project is “restoration,” why this restoration need, to remove the livestock from aspen, never considered?

Response – Comment 20

This project does not propose to regenerate aspen stands, in some units it proposes simply to increase the aspen component by removing conifer competition. The decline in aspen associated with conifer competition has been well documented with research on the BDNF (Wirth et al 1996), in Montana (Steed and Kearns 2010), and for species-wide distribution in the western United States (Bartos 2001). Walk-through surveys in the project area found that conifer competition and crowding by conifers is a concern

While it’s true both livestock and wildlife, have an impact on aspen in single locations, the effect at a forestwide scale is not detrimental. Long-term monitoring on the BDNF indicates that overall browse on aspen is low on trees taller than 5 feet. As described in the 2008 Monitoring report, we found little basal scarring on aspen from chews or rubs from ungulates.

If this were a stand replacement project where the objective was to stimulate sprouting, then fencing would be necessary to ensure success (2008 Monitoring Report). Some sprouting can be expected with this project as the aspen clones increase in vigor through the elimination of conifer competition and crowding. Worm fencing and jack-strawed trees will contribute to the protection of the sprouts. Monitoring indicates that non-stand replacement treatments such as conifer clearing adjacent to, and inside a stand of aspen is effective in stimulating long term sprouting even if browse continues to limit growth (BNDF 2008).

L-19 Comment 21: Cumulative Effects: The RDEIS notes repeatedly that the project will only affect a small percentage of the total forests in the project area. However, the status of both the logged and unlogged habitats that will remain after the project is never identified in the discussions of how much habitat will remain. The public will be provided better information by a description of how much of the landscape will remain as larger, unlogged forests upon project completion, so that cumulative impacts of logging can be clearly understood.

Response – Comment 21

The general effect of the proposed vegetation treatments is that 7,163 acres over 69 units (15 percent of the EDLV project area in Alternative 2) or 6,819 acres over 76 units (14 percent of the project area in Alternative 3) would have. These acres would provide opportunity for new plant establishment as well as increased resiliency for existing vegetation. The effects of the proposed vegetation management actions are similar to past management actions in the project area and would create an environment where the targeted vegetation type would have improved growing conditions, creating additional opportunities for new plant establishment or improving resiliency of existing vegetation per Forest Plan objectives.

Please see the vegetation section of the FEIS for an updated analysis of cumulative effects to vegetation that addresses these comments.

L-19 Comment 22: It is also unclear whether past logging [11,772 acres 9 page 353) or up to 12,105 acres (page 41)] also qualified as “restoration since these are the same types of logging that are current (sic) proposed. What were the benefits of this previous restorations (sic) for wildlife This is never identified in the RDEIS. Please define these benefits so that the public can understand what will likely occur with the newly proposed restoration activities.

Also, please define specifically why more restoration is needed for wildlife? What were the benefits to wildlife from the previous logging activities? The specific benefits that are expected for all wildlife

species were never identified in the RDEIS based on past benefits from previous logging. The exact reasons why up to 1,672 acres of clearcuts and 841 acres of mixed conifer thinning, and 194 acres of commercial thinning for alternative 3, the preferred action, will add to past benefits of logging were never defined in the RDEIS.

Response – Comment 22

Please refer to the response to L-19 Comment 19 above in regard to the definition of restoration treatments. Direct, indirect and cumulative effects to species analyzed in detail are included in Chapter 3. The cumulative effects analysis included past activities, which included past timber activities.

L-19 Comment 23: Sagebrush Habitat Management: It is noted that no sagebrush will be burned in the Project. However, there is no discussion of the impacts of livestock grazing on this key wildlife plant. The only restoration needs addressed for sagebrush were conifer encroachment into sagebrush stands. This is an arbitrary identification of restoration needs in sagebrush, since livestock grazing can be highly detrimental to sagebrush. Please address the benefits to sagebrush restoration that would occur with a reduction of livestock grazing, since high levels of livestock grazing were not historic conditions under which this species evolved.

Response – Comment 23

Sagebrush is a very minor component in the project area. A couple of small patches grow in the Cliff Mountain Allotment and one in the Dry Cottonwood Allotment. Both allotments have allotment management plans that include upland utilization standards. Adjustments to livestock grazing are not part of the purpose and need of the project. Cumulative effects that may occur from the combination of the effects of alternatives with ongoing actions such as livestock grazing are discussed by resource section in Chapter 3 of the FEIS.

L-19 Comment 24: Unroaded Areas: Please define why an unroaded area does not begin until it is 0.33 miles from a road. What type of road qualifies as providing this 0.33 mile buffer? Does it have to be a system road, or can it be a temporary road or a user-created road?

Response – Comment 24

None of the roads qualify as having the .33 mile buffer to delineate the spatial scale for analysis of wilderness attributes and roadless characteristics. The buffer is used in the analysis to describe the existing condition within that 1/3 mile area within the spatial area (which begins at the edge of the road prism) analyzed for effects of alternatives to the wilderness/roadless attributes. Please see the Roadless Section of the EIS in Chapter 3 for additional information on the methodology for how the spatial delineation of polygons analyzed was completed.

L-19 Comment 25: Weed Management: Please include an analysis of what the expected costs will be for weed treatment prior to and after the project is completed. Please define what the management program is for cheatgrass, and how it will be treated, including if it increases after treatments in logged and burned areas. Please define how livestock grazing is affecting weeds. Is there a guarantee that weed treatment monies will be available after project completion to treat additional weed infestations that will be created along new roads. Is the weed budget for this area currently adequate? How often is every weed infestation treated in the Project Area? The RDEIS at 707 notes that there are weeds in old clearcuts. Since these harvest units are quite old, why are there still weeds there? Why hasn't treatment been effective. Actually, there are many weedy areas in many old units, as well as along roads. If the agency is taking care of this problem, why are the weeds still so prevalent? Since previous weed problems have not been taken care, why should the public expect the current project to be any different in increasing weed acreages in the project area.

Response – Comment 25

Even though cheatgrass is not considered a noxious weed by the state of Montana, design criteria are incorporated into both action alternatives to ensure it is not intentionally spread. Cheatgrass infestations in the project area are small and primarily confined to roadsides, most notably along Dry Cottonwood Road.

Current and projected costs for noxious weed control within the project area will vary by species treated, extent or density of infestation, mode of treatment, treatment method, and accessibility. Past weed control efforts, including Forest Service and contract spraying, have been successful in limiting the rate of spread and reducing plant density, but have not resulted in complete eradication. Most noxious weeds produce large numbers of seeds. It may take multiple herbicide applications to control a noxious weed infestation. As a result of BMP's, monitoring, and mitigation associated with other activities and an aggressive noxious weed control program, infested acres have been reduced in the project area. The noxious weed inventory in 2000 identified 1,352 acres within the project area while the 2010 inventory identified 780 acres with the project area - a 43% reduction of infested acres. Forest plan monitoring reports (2006-2007) state that BMP's are effective in reducing noxious weed spread. Noxious weeds will continue to be monitored and treated in the project area under the Forest weed program.

L-19 Comment 26: There is a huge difference between the weed discussion in the DEIS and the RDEIS. Suddenly there is a huge improvement in weeds from 1,352 acres to 780 acres (RDEIS Vii). The reason for this remarkable decrease in the last several years is unclear. Was the information in the DEIS incorrect, and if so, why should the new information be considered “correct.”

Response – Comment 26

This document incorporates updated noxious weed inventory data completed during the 2010 field season and is discussed in the Invasive Plants section. One of the reasons for the updated information provided in the RDEIS and this FEIS is to be responsive to comments such as this.

L-19 Comment 27: Please define how many acres of weeds are treated annually in the Project Area, and the cost per acre of treatment. Please define what the expected increased weed treatment acres will be after project completion. What are the long range expected costs for weed treatment. Will they go up or down?

Response – Comment 27 - Weeds

Both the annual acres treated and cost for noxious weed control vary by species treated, extent or density of infestation, mode of treatment, treatment method, and accessibility. Mitigation measures, project design features, BMP's, and monitoring will reduce the potential of noxious weed spread into proposed units. Long range noxious weed treatment costs should go down as more infested acres are controlled. Monitoring costs will increase. Noxious weed control will continue within the project area regardless of this project under the BDNF Noxious Weed Control Program Final EIS and ROD (USDA Forest Service 2002).

L-19 Comment 28: Historic Conditions: The RDEIS claims that the Douglas-fir stands in the Project Area historically were much less dense. Please define specifically what habitat types the proposed treatment units are, and what their typical basal areas should be as per habitat types. If the proposed basal areas of 60-80 square feet are much lower than the habitat type criteria, are you saying that the habitat type data is wrong?

The desired basal area for lodgepole pine is implausible, with a range of 60-100 square feet. What habitat type descriptions for lodgepole pine provide this basal area as a characteristic?

Please discuss the newer science by folks as Baker and Hansen that discuss historical crown fire frequencies, which are actually quite long. Also please discuss the historical fire frequencies defined in old growth forests by Green et al. 1991. Since Green identifies quite long fire cycles for both lodgepole pine and Douglas-fir, why is this information different from what is being claimed in the current project. Does Green et al. 1991 need to be revised?

Response – Comment 28

Please see the Vegetation Environmental Consequences section. Douglas-fir vegetation types (Douglas-fir/pinegrass, Douglas-fir/twinflower) and subalpine fir types (subalpine fir/twinflower and subalpine fir/grouse whortleberry) are relatively moist to moderately dry and are the primary habitat types in the project area. The following habitat types were identified in the Douglas-fir treatment areas: Abies lasiocarpa/Vaccinium scoparium (ABLA/VASC), Pseudotsuga menziesii/Linnaea borealis (PSME/LIBO), and Pseudotsuga menziesii/Calamagrostis rubescens (PSME/CARU). Habitat types do not use basal area as a defining characteristic, nor are there typical basal areas or ranges specified in Pfister et al. 1977, Forest Habitat Types of Montana. Heyerdahl et al. 2006, Joy and Hutton 1990, Arno and Gruell 1983, and Fischer and Clayton 1983 are all sources specific to the BDNF and the project area which give a researched history of vegetative succession. These sources were used in developing the desired condition for Douglas-fir and lodgepole pine vegetation types.

The Forest Plan vegetation goals, standards, and objectives were developed based on historic vegetation patterns and size class structure. In Douglas-fir stands, the desired condition is to have larger diameter (up to 30 inches dbh), open-grown, widely spaced old trees (Joy and Hutton 1990) in stands averaging 60-80 ft²/ac of basal area and a range from 40-100 ft²/ac. Current basal area in the Douglas-fir stands ranges from 100-240 ft²/ac. Stands in the desired condition would be resilient to inherent insect and fire disturbance regimes. The Forest Plan objective for the Douglas-fir type is to reduce stand densities in the large size classes of Douglas-fir dry forest communities to maintain or improve resilient forest conditions.

The Forest Service does not know which Baker and Hansen study you refer to - no specific citations were provided and a search in the silviculture literature and reference collection and on Google Scholar did not find a reference with these authors. Thus this portion cannot be discussed in this context.

Old growth stands in the northern Rockies that proceed from a stand-consuming fire, through dominance by seral tree species, and then to climax are typically short lived, due to the high probability of crown fire. Many of the oldest stands of old growth are dominated by seral tree species that are maintained as dominants and protected from crown fire, by repeated underburns that reduce ladder fuels and competition from more tolerant tree species. Green et al. does not define old growth - it sets "...minimum screening criteria (that) can be used to identify stands that may meet the old growth type descriptions...Because of the great variation in old growth stand structures, no set of numbers can be relied upon to correctly classify every stand. Do not accept or reject a stand as old growth based on the numbers alone; use the numbers as a guide."

For the East-Side Montana Zone Old Growth Type 2 (Douglas-fir) that was identified in proposed units, Green et al. reads "Prior to 1900, cool underburns at intervals of 10 to 40 years promoted open stands, while hotter stand replacing fires occurred at intervals of 150 to more than 300 years." In the East-Side Montana Old Growth Type 6 (lodgepole pine), it reads "Natural fire frequency is variable because of the wide range of habitats but lodgepole pine stands may have experienced thinning fires on a 35 to 40 year frequency on some sites. Other sites have had longer fire free periods that may have been as long as 350 to 400 years, at which time a severe stand replacing fire would be normal. Setting the stage for catastrophic fire has been large amounts of dead fuel created by mortality from mountain pine beetle attacks." The Fire and Fuels Management Section states "Historic fire return intervals in

the project area, for example, ranged from 25 to 200 years.” Fire return intervals in the fire and fuels report are only estimations out of the Fire Regimes which range from 0-200 years + (Agee 1993, Brown 1995). Historical Crown Fire Frequency was not analyzed because the EDLV project is not a fuels project and there is nothing in the purpose and need for that kind of analysis to address.

As far as revising Green et al; we assume your reference is Green et al. 1991. Revision of that report and the errata published in 2005, 2007, and 2008 are not within the decision space for this project

L-19 Comment 29: Whitebark pine: The current best science indicates that management of whitebark pine requires the provision of abundant older, mature high cone producing conifer forests at lower elevations. These forests are critical to Clark’s nutcrackers, who only incidentally use whitebark pine if other forests are abundant. The actions planned for the Project are directly counter to the key conservation strategy for whitebark pine, and are a violation of the NFMA to ensure that vulnerable species are not maintained on the landscape by conservation measures identified as the current best science.

Response – Comment 29

Please see the updated analysis of Whitebark Pine in the Sensitive Plants and Vegetation sections of the FEIS which address this comment.

L-19 Comment 30: Snag Management: There is no analysis in regards to cumulative impacts of snag habitat in the Project Area. Although the loss of snags from firewood harvest was noted (798 acres along 188 miles of open roads), and a loss of over a hundred acres of snags from roadside harvest, these impacts were never described in relation to the availability of snags 10 inches dbh or greater in the Project Area. In addition, the availability for 10 inch snags in past harvest units was discussed as being largely gone. In addition, there was no inventory of snags anywhere in the Project Area, either in past, planned, or remaining unlogged forests. In effect, there is no information on snag availability in the Project Area, at present or after logging. **So the agency will violate the NFA and the NEPA by failing to define project and cumulative impacts on snag associated wildlife.**

Response – Comment 30

Snag inventories outside of the proposed treatment units were not conducted as this is not required; however, of the 17,937 acres in the project area identified as lodgepole pine, approximately 16,000 acres (90 percent) are dead and currently available for snags. This proposal would reduce the acres available for snags by about 2,000 acres (approximately 12 percent of the dead and dying lodgepole pine); however, the acres treated would meet the Forest Plan standards for snag retention by leaving the remaining 15,000 acres (88 percent) of dead and dying lodgepole pine type in the EDLV project area, see Wildlife section.

More specific snag data was extracted and extrapolated from the Detailed Vegetation Assessment Walk-Thru’s. There is no requirement in the BDNF Forest Plan for snags 10+” dbh, only for those greater than 15” dbh. All trees (live and dead) greater than 15” dbh will be retained in the mechanical vegetation treatment units unless determined to be a hazard by the purchaser/operator to meet these standards.

These per acre requirements do not apply to the treatment units if analysis shows the levels of snags would be met for the project area as a whole. If, in the project area as a whole, there are insufficient live trees and/or snags greater than 15 inches dbh, the standard is deemed complied with by retention of the existing live trees and/or snags greater than 15 inches dbh in the treatment units. Snags would be clustered adjacent to natural openings, near water, in valley bottoms, or in aspen groves wherever possible.

L-19 Comment 31: What is the effect of the lack of larger snags over 10 inches in the Clark Fork Flint landscape, as it is below the forest average. How did this affect the decision to heavily log the Project

Area? How specifically was this snag shortage addressed in project planning and selection of alternatives? It would seem that an obvious restoration need for this landscape, to meet Bollenbacher et al. 2008 which the agency says you are applying, would require no logging so that snag numbers can increase to meet the natural levels. Why wasn't this ecological problem determined to be in need of restoration for this restoration project?

Response – Comment 31

This analysis did not identify a lack of large snags or snag shortage in the project area, nor was it determined to be an ecological problem; thus, a snag shortage was not addressed as such. The Clark Fork Flint landscape exceeds Bull et al. (1997) in large snags alone. The FIA shows snags are well distributed forestwide and by landscapes. These densities and Forest Plan snag objectives are compatible with the Northern Region Snag Protocol (2000) vegetation response units (VRU). The same diameters are also compatible with Samson (2005, amended 2006, and 2006a). See also response to Comment 30 from Letter 19.

The Forest Plan management direction for snags ensures that an adequate amount of snags are retained for snag dependent species over time, including the goal to provide snags well-distributed by vegetation category and size class over time through Wildlife Standards 3 and 4. Both Standards will be adhered to for this project and an additional requirement was added in Alternative 3 that no trees (live or dead) greater than 15" dbh will be cut in the project area.

L-19 Comment 32: Please answer this question: does the BDNF require any 15 inch snags anywhere on the landscape, and if so, what is the specific requirement? We cannot tell from the RDEIS or the RFP that there is any actual requirement for any snags anywhere on the Forest. The RFP provides a final definition of the snag management is that it can be met regardless of whether any snags exist.

Please define what the current snag level is in all the proposed harvest units of snags 10 inches dbh or greater, as the current best science defines usable (sic) wildlife snags as 10 inches or greater. Also, please define the acreage of the project area that is providing at least 4 snags greater than 10 inches dbh, which is the recommended minimum level of wildlife by the current best science.

Response – Comment 32

Wildlife Standard 3 show the minimum average snags per acre to be retained are 3.6 or 8 greater than 15 inches dbh, except where they pose a safety hazard to operators and/or the public. The Vegetation Section of the FEIS summarizes snags by unit, vegetation type, and size. See also the response to your comment above.

L-19 Comment 33: Bollenbacher et al. 2008 is not different from the Northern Region Snag Protocol. This report simply defines the snag densities for various habitat groups on eastside forests. The RDEIS states that the BDNF does not follow the Northern Region Snag Protocol. However, we believe this Protocol applies to all Region 1, with eastside forests using Bollenbacher et al. 2008 snag densities.

Please define the acreage of areas in the Project Area that currently meet Bollenbacher et al. 2008 for warm and cool habitat groups. After the project is completed, what will this acreage be?

Response – Comment 33

Bollenbacher et al. 2008 states "In 2000, the Northern Region Snag Management Protocol provided optional snag retention standards which were based on using FIA data from western Montana forests". However, the Protocol specifically recognized that FIA data from northern Idaho and eastern Montana was not used in the Protocol, as it was not available at the time. FIA data is now available and the data for the eastside Forests in this paper provides the most current snag data available. Snags by vegetation type across the entire land base between the three geographic areas of the Region

are discussed in the Vegetation section. There is a statistically significant difference in the density of snags and large-live trees between these areas due to biophysical and climatic differences between the areas. This suggests that snag analysis and management plans pertaining to snags should be formulated by geographic area and not extrapolated from one area to another. Furthermore, the 2000 Protocol specifically provided that when local data are available or are considered better than the sources used in the Protocol, Forests have the option to use those data sets. This report provides a replacement for the Northern Region Snag Protocol for eastside Montana forests in Region 1. The snag information provided in this paper does not set forth mandatory or required direction but rather provides current snag information and analysis for consideration by the Forests." See also the response to Comment 31 of Letter 19.

Bollenbacher et al. 2008 does not have a requirement for warm and cool habitat type groups, only how it defines them. For the timber units, it is estimated that there will be approximately 1,354 acres in the Cool type and 469 acres in the Warm type for Alternative 2. In Alternative 3, the estimates are 1,412 acres in the Cool type and 613 acres in the Warm type. Both Alternatives have acres which are undetermined as of yet.

These vegetation groups are based on habitat types which do not change based on management activities; thus these acres will remain the same after the project is complete. According to Pfister et al. (1977) which developed and defined the habitat types in use in Region 1, it is a "...classification system for potential vegetation... (page 141)" and is most importantly used "... as a land stratification system - designating land areas with similar environments or biotic potential - thereby providing a tool for cataloging and communicating research results, administrative study results, accumulated field observations, and intuitive evaluations. The habitat type classification is presented as a foundation for basing predictions of response to land and vegetation management activities (page 139)."

L-19 Comment 34: The RDEIS infers repeatedly that adequate snag habitat will remain in all the untreated areas. However, there is no data to show what that snag sizes and densities are in all these other areas. As such, snag availability in these areas is just speculation, which as best is clearly wrong given that a third of the area has already been logged, and much of the area that will remain after this project will have trees too small to provide a 10 inch dbh snag. Please provide an accurate assessment of the current and planned snag habitat in the Project Area, rather than just making unsubstantiated claims.

Response – Comment 34

Please review the responses to your comments 30 and 31 above.

L-19 Comment 35: The RDEIS does not say that alternative 3 will retain all 20 inch dbh snags. Will this happen? Also, please discuss whether all 20 inch snags will be retained regardless of whether or not they have commercial value. From our experience, few to no 20 inch snags are ever saved because they have commercial value and are thus declared a safety hazard. If you cannot define how many 20 inch snags will remain in all the harvest units, how do you estimate the project impacts on this critical habitat feature?

Response – Comment 35

For Alternative 3, all trees (live and dead) greater than 15 inches dbh will be retained in the mechanical vegetation treatment units except where they pose a safety hazard to operators and/or the public (i.e., if they are located within one tree-length from a road open to the public for motorized vehicle travel). This requirement includes 20 inch dbh snags. See also responses to your comments above.

L-19 Comment 36: At least 25% of the forest birds are associated with snags. These include a number of Montana Species of Concern. Yet the RDEIS provides no information on current or expected snag densities across this landscape. So how can the environmental impact of this project be assessed on this large group of species? Impacts on so many species will clearly affect diversity.

Response – Comment 36

Impacts to snags and snag associated birds were analyzed in detail in the Revised DEIS and the analysis is carried forward in the FEIS. During the Forest Plan Revision process, snag density was calculated using current forest inventory and analysis (FIA) data that was collected through 2003. For this estimate, Bush et al (2006) found an average of 4.3 snags 10 to 19.9 inches in diameter at breast height (DBH) per acre in the Clark Fork-Flints Landscape. Areas of past timber harvest are expected to be very low on large snags; those that were left would most likely have fallen by now (lodgepole fall between 5-15 years). Much of the analysis area is in a size class that is susceptible to mountain pine beetle; as a result the current lodgepole pine stand mortality ranges from 75-99% (see Vegetation Report).

Fire, both prescribed and natural, and insect and disease outbreaks tend to create snags, while timber harvest activities can reduce snag density. From 2000 to 2007, more than 300,000 acres of forested landscape in the analysis area and surrounding National Forests were affected by fire, more than 5 million acres were affected by insects, and less than 45,000 acres were harvested or thinned. It is expected that there will be increasing snag densities in all diameter classes over time across the Region due to the ongoing and predicted future increases in mountain pine beetle epidemics and fire events (Bollenbacher et al. 2008).

Since that analysis, ERG (2010) modeled changes in vegetation and wildlife habitat as a result of the mountain pine beetle epidemic. Future insect mortality was modeled, as well as the effects of potential future vegetation management. At the Forest scale there was little difference in cover type, tree size and structure and density between treatment and no treatment scenarios (1-2%). In the Clark Fork-Flints landscape, beetle activity was present in approximately 19% landscape, and through 2009 (ERG 2010). Within the project area, it is estimated that 90% of the lodgepole pine stands have been affected by mountain pine beetle.

Because of the widespread mortality of lodgepole pine across the Forest, the Forest Plan focuses on retention of rare elements - large snags. The two action alternatives take different approaches to meeting the Plan snag direction. Alternative 2 applies the Forest Plan snag direction as written, while Alternative 3 would retain all trees (live or dead) over 15" DBH. The alternatives would affect 13-14% of the lodgepole pine habitats in the project area. Predicted differences based on different approaches to addressing the Forest Plan standard are discussed in the Vegetation section. The remaining 86-87% of the lodgepole pine habitats would provide large quantities of snags of all diameters, for 5-15 years, until they fall.

The snag direction in the Forest Plan is based on Bollenbacher et al. (2008). That analysis looked at the density and distribution of snags by various areas, habitat types, dominance groups and seral stages. That analysis also considered the potential impacts of timber harvest and human access on snag density. The actual snag retention numbers in the Forest Plan are based on snag densities from wilderness/roadless lands on the eastside forests. The direction focuses on retention of uncommon and rare elements; large diameter standing dead trees, (smaller diameter dead trees are abundant across the forest due to the mountain pine beetle epidemic) and large, living trees. Both approaches and alternatives would meet the Forest Plan snag standard.

Hutto (2006) reviewed snag management direction in burned forest. While this project is not in burned forest, dead and dying trees are abundant and some of the concepts he discusses are relevant. He found that the most valuable wildlife snags in green-tree forests are relatively large, likely to be thick-

barked (i.e., Douglas-fir as opposed to lodgepole pine that is thin-barked) and are relatively deteriorated. In addition, broken-topped snags are disproportionately important. In burned forests he found that large, thick-barked trees are still important, but sounder trees with less decay are also important. In this project, all trees (live or dead) greater than 15" (these would largely be Douglas-fir which are thick-barked) would be retained in the mechanical treatment units. Dead or dying lodgepole pine less than 15" DBH would never grow into 15" DBH trees or snags.

L-19 Comment 37: What specific measures will indicate how this project will affect snag-associated wildlife, since the number of snags anywhere in the area is unknown before and after treatment, and there is no MIS for snags? Since there is no specific number of snags required, and there is no snag MIS, exactly how can impacts be defined to the public for this diverse group of species?

The RFP direction does not relieve the agency from implementing NEPA. The impacts of the project, past and planned, need to be defined for snag associated wildlife.

Response – Comment 37

Impacts to snags and snag associated wildlife are analyzed in detail in General Wildlife Habitats Considered. Please refer to the response to your comment 36. Additionally under Species of Interest there is a specific analysis of effects on woodpeckers.

L-19 Comment 38: Please define how the lack of any snag distribution requirement per given acre for the RFP and as applied to the Project will affect snag associated wildlife, Specifically, now can snags in one location compensate for a lack of snags in another location? The current best science, as well as the Northern Region Snag Protocol, require snags to be provided within each stand, and within every 25 acres. The RDEIS cites Bollenbacher et al. 2008 as the basis for not requiring snags to be evenly distributed across the landscape. However, Bollenbacher et al. 2008 was not a study of wildlife. This report simply identified historical snag densities. This report cannot define the snag distributions that wildlife require, since it did not study this issue.

Response – Comment 38

Please see the response to your Comment 36 above.

L-19 Comment 39: We would like to know what the current density and size of snags are within each proposed harvest unit, and what these levels FOR EACH UNIT will be after logging. This is the only way the public can understand how the project will affect the broad suite of snag-associated wildlife.

The agency states that you are applying Bollenbacher et al. 2008. However, this report as well as the Northern Region Snag Protocol both address historic snag densities WITHIN forests, not in harvest units. Snag management requires that historical snag densities be provided within forest stands. In addition, a number of snag-associated species require undisturbed forest. This key factor in snag management is not even mentioned in the RDEIS. And there is no information as to how forest snag habitat will be provided, and at what levels, in the Project Area. Please evaluate how wildlife that require snags within undisturbed older forests will be affected by the proposed project in conjunction with past logging.

Response – Comment 39

More specific snag data was extracted and extrapolated from the Detailed Vegetation Assessment Walk-Thru exams and is available in the Vegetation section and habitat analysis can be found in the Wildlife Section. Please review the responses to your earlier comments on this topic above.

L-19 Comment 40: Please discuss woodpecker management areas as per the current best science. This science indicates that large undisturbed forest areas of suitable habitat must be retained to ensure viability of woodpecker populations as well as the wildlife species that depend upon woodpeckers to create nesting

cavities for them. Where will these areas be provided in the Project Area? How will future mountain pine beetle epidemics be maintained in the Project Area for woodpeckers and other wildlife?

There is no information on management of the pileated woodpecker. There is a considerable amount of science on how this species should be managed and this science is similar to that required for other woodpeckers as well, as the black-backed woodpecker. Why isn't there any specific management for this S3 species in the Project Area, and without specific management, how can this species and other woodpeckers be maintained?

The RDEIS at 312 has a summary of the age classes and sizes of forests in the project area. These include 14,227 acres of smaller trees, from seed/saps to poles, or trees under 9 inches dbh. The total coniferous forest in the area is 30,082 acres, so 47% of the project area has no large snags at least 10 inches dbh. Why isn't this a problem for maintaining a diversity of forest species associated with snags? After project completion, this snag habitat void will be significantly increased. **As we asked previously, it is not clear why this project is defined as "restoration" when a key habitat feature for over 25% of the forest birds is being further reduced when it is already very limiting.**

Response – Comment 40

Please refer to the responses to your comments 36 and 37 above. Additionally under Species of Interest in the Wildlife section there is a specific analysis of effects on woodpeckers.

In addition, only certain types of activities are defined as restoration activities in this project - not all activities. These activities are explained in detail in the FEIS and are found in this document in Chapter Two description of Alternatives under the "treatments in Restoration Units.

L-19 Comment 41: Please define why the RFP does not require snags 15 inches or less. The RDEIS notes that most lodgepole pine stands do not have any trees 15 inches dbh or greater (RDEIS at 687). So what is the purpose of a 15 inch snag standard? How could this possibly retain habitat for snag-associated species in lodgepole pine units?

The RDEIS at 336 says the project will be in compliance with the Northern Region Snag Protocol, where elsewhere it says the BDNF does not follow this protocol (RDEIS at 687, 690). Please clarify how the Northern Region Snag Protocol is applied to this project.

Response – Comment 41

Compliance with the R1 Snag Protocol is addressed in our response to your comment 36 above.

The Vegetation Section details how many snags greater than 15" dbh were noted in each unit - there may be more that were not picked up during the walk-thru vegetation assessments. Units are different than stands. The Corrected FEIS and this FEIS define a stand as "A community of trees or other vegetation uniform in composition, constitution, spatial arrangement, or condition to be distinguishable from adjacent communities." A unit is a stand, portion of a stand, or stands that are identified for each project in which management activities may take place based on similar vegetation characteristics. Units and stands are not interchangeable terms and have different meanings.

Bollenbacher et al. 2008 shows a high level of >10" DBH snags existing on the landscape and that due to the ongoing and future predicted bark beetle epidemics and fire, many more snags will be available in the 10"+DBH size. To further ensure snag recruitment, Wildlife Standard 4 provides direction to retain live trees greater than 10" dbh on a per acreage basis. So the direction in the Forest Plan provides management guidance for habitat components to support viable populations of cavity users; plan direction is consistent with Bull et al. (1997) and the previous regional protocol (USDA Forest Service Northern Region 2000).

Where active vegetation treatments occur, the Forest Plan is conservative in retaining snags >20" DBH (except for safety concerns) and prescribes snag and live tree retention levels consistent with those found in unmanaged areas. It contains direction regarding dominance type and age class, including both snags and old growth that are designed to restore, maintain, and retain a range of landscape conditions reflecting the conditions under which species coevolved, as well as expected future trends. See also response to your Comment above.

L-19 Comment 42: The RDEIS at 336 says that treated areas will meet the RFP snag direction by leaving 115,000 acres of the 17,037 acres of lodgepole pine forests unlogged. This is apparently the application of the RFP snag standard, which is no snag management. Please correct us if we are wrong. Will this project leave any snags in any harvest units, and if so, how many and in which units.

Response – Comment 42

You read the acre numbers in error. The Revised DEIS reads "...the acres treated would meet the Forest Plan standards for snag retention by leaving the remaining 15,000 acres (88%) of dead and dying lodgepole pine type in the EDLV project area." That number was carried over into this document as well. Please see the paragraph above. And see responses to your Comments 30 and 31 above.

L-19 Comment 43: The RFP provides a few trees for snag recruitment, but it is not clear how a few trees, or less than one tree per acre, can provide 8 snags per acre in lodgepole pine forest. We asked this question as per the DEIS, but it was not answered. Please explain how this recruitment model will retain 8 snags per acre over 15 inches dbh.

Please identify the acreage in the Project Area that will lack 4 snags per acre over 10 inches dbh, and as well, which will not meet Bollenbacher et al. 2008.

Response – Comment 43

Green tree replacements for snags are not the only source of snags - those already existing go towards meeting the retained snags per acre. For the Warm type, this would be 3.6 snags per acre and for the Cool type, it would be 8 snags per acre. Under Alternative 3 all trees (live or dead) greater than 15 inches dbh would be retained.

There is no requirement to identify acres in the project area that will lack 4 snags per acre over 10 inches dbh or which will not meet Bollenbacher et al. 2008.

L-19 Comment 44: The RDEIS at 341 says that the final determination of snags will be done prior to logging. So this has not actually been determined, which means that neither the agency or the public knows how many snags will actually be left for wildlife.

The RFP snag standards imply that a project area inventory of snags will be done for projects. However there was no such inventory for this project (RDEIS 345). Why does the RFP imply a snag inventory is required when in fact it is not? Is or isn't a project area snag inventory required by the RFP? The RDEIS at 684 states that no snag inventory in the project area is required if snags over 15 inches dbh are not harvested. Is this correct? This was not clarified in the RFP

Response – Comment 44 Veg

The comment in the first paragraph is a partial quote and a misinterpretation of the Revised DEIS which reads in full: "For snag retention and recruitment purposes, approximately 2/3 of the timber units are in the cool type, requiring 0.9 live trees greater than 10 inches dbh and all trees (live and dead) greater than 15 inches dbh per acre. The remaining 1/3 are in the warm type, requiring 3.6 live trees and 3.6 snags, respectively. These are minimum averages and are calculated for the total treatment acreage in the project area (6,820 acres). The final determination on vegetation type and

snag requirements will be made by the silviculturist in a stand diagnosis and/or written prescription prior to treatment implementation. All trees (live or dead) greater than 15 inches dbh would be retained."

A snag inventory was done for the mechanical vegetation treatment units - see the response to your Comment 30. There is no requirement for a project area-wide inventory - we do not agree that the Forest Plan implies there is. The response in the Revised DEIS on page 684 stated that snag standards will be met with either action alternative, and Alternative 3 went above and beyond the requirement by requiring all trees (live and dead) greater than 15 inches dbh be left in treatment areas. Wildlife Standard 3 (the snag standard) gives snag retention numbers for snags 15+ " dbh; by leaving all trees 15+ " dbh, all snags (and live tree replacements) will remain to meet this Standard. This Standard applies to the total treatment acreage in the project area.

L-19 Comment 45: There was no analysis of how thinning in Douglas fir stands will affect snag recruitment by a reduction of insects and disease. The impact on snags clearly needs to be completed prior to making a decision to thin Douglas-fir stands. **If snag recruitment is affected, and reduced below Bollenbacher et al. 2008, then why is thinning proposed?**

The RDEIS at 424-425 note that different strategies in Alternatives 2 and 3 both meet the RFP, one leaving snags in units and one leaving all trees, dead or alive over 15 inches. And at 427, the agency notes there can be different strategies to meet the RFP snag standards. **Since there is no single snag strategy for the RFP, how can the agency determine post-logging snag habitat and impacts on wildlife? How is the public to understand what the different snag strategies mean for snag retention? Please define what the expected snag densities are for these two different strategies. Do they provide the same snag levels, and if so, what are these? If they provide different snag levels, what are these?**

It does not seem that these 2 different strategies are actually different. The RDEIS states at 684 that no snags will be retained in clearcuts for either alternative. The RDEIS at 684 also states that the RFP snag strategy is met if no trees over 15 inches dbh are logged. Is this correct? If so, then there is actually no requirement for snag management or snag inventories for any logging project as long as trees over 15 inches dbh are not logged, except for hazard trees. In fact, logging of trees over 15 inches is not prevented, since any hazard tree and roadside salvage areas can take any size trees. **So there is actually no single requirement for any RFP snag management, as far as we can tell. As a result, the agency is violating the NFMA by failing to ensure a diversity of wildlife will be maintained across the Forest.**

Response – Comment 45

Fire is the major change agent across the BDNF that produces snags. Considerable numbers of snags are created by insects as is currently evident across the forest. Thinning in Douglas-fir stands will not eliminate insects or disease or snag recruitment from the stands - that is not possible, nor is it an objective of the treatment. Reduction in stand densities in the Douglas-fir component is expected to improve the overall condition and vigor of the residual trees by reducing competition in stands. Improved condition and vigor would likely result in stands less susceptible to future insect and disease threats as discussed under Restoration Units - Non-commercial Thinning in Douglas-Fir Dominated Stands. Forest Plan snag standards will be met with both action alternatives.

It does not matter which approach is used to meet the Forest Plan snag standards (Wildlife Standards 3 and 4) as long as they are met - these are the requirements for snag management from the FP. The minimum snag and live tree retention standards are the same for both Alternatives 2 and 3 as these are Forest Plan standards. The minimum snags >15" dbh per acre are 3.6 for the Warm vegetation category and 8 for the Cool category. The minimum live retention trees >10" dbh are 1.3 for the Warm category and 0.9 for the Cool category. Alternative 3 should provide more snags and snag recruitments since it leaves all trees greater than 15" dbh whether live or dead.

Nowhere on page 684 of the RDEIS does it read “no snags will be retained in clearcuts for either alternative.” The only reference to snags and clearcuts in this response to a comment is on the next page (685) where it reads: “Clearcutting in part of the 1980s and in the 1990s left snags based on the Deerlodge Forest Plan (1987) snag standards. A portion of those have likely fallen by now. In the 1970s, it is likely that no snags were left as there was no direction for snag retention at that time. The clearcutting from the 1950s and 1960s is now pole-sized and larger and has considerable mortality due to mountain pine beetle, and has an abundance of smaller-diameter snags.” See also responses to Comments 30, 31, and 44 of Letter 19.

L-19 Comment 46: If unlogged habitat can be used to mitigate for the loss of snags in logged areas, what specifically is required to achieve mitigation? The overall effect is that snag habitat is being reduced, and not logging the entire area is not mitigation. So it is not clear how this mitigation measure can be effective in maintaining a diversity of snag-associated wildlife.

The severe impacts to snag-associated wildlife species is never evaluated or disclosed to the public; **there was no hard look at this serious problem with this project, especially given the past level of logging.**

Response – Comment 46

Impacts to snags and snag associated wildlife are analyzed in detail in General Wildlife Habitats Considered. Please refer to the response to your comment 36.

L-19 Comment 47

The RDEIS at 689 says that logging will not affect snag recruitment in clearcuts because no snags will be created for the next 100 years. Why isn't this a severe impact of clearcutting? Since no snag habitat will be created for the next 100 years, why is clearcutting proposed, as habitat for over 25% of the forest birds will be eliminated for the next 100 years. **Specifically, how was this impact addressed in the project design to create not only clearcuts, but vast acreages of clearcuts over several hundred acres?**

Response – Comment 47

Besides the recruitment trees and live and dead trees >15” dbh left in the units, large quantities of snags would be present outside of the proposed units. These would provide habitat for those species that use standing dead trees (as opposed to snags within a live forest). We expect dead lodgepole pine to fall within 5 to 15 years.

This was pointed out earlier in the Revised DEIS on page 689: “Most of the trees in these salvage units are already dead, so salvage would not affect snag recruitment over the next 100 years. Snag recruitment over the next 100 years will come from regenerating lodgepole pine “(whether salvaged or not). If the trees are already dead, they are not eligible for snag recruitment, so salvaging them does not affect the recruitment which comes from live trees. Wildlife Standard 4 (live tree recruitment) applies.

The immediate increase in available light created by salvage treatments would stimulate understory vegetation, including growth of seedling and sapling Douglas-fir, lodgepole pine, and aspen, as well as other conifers. The solar heating at ground level would open the lodgepole pine serotinous cones. By salvaging lodgepole pine rather than allowing the dead trees to fall to the forest floor in the next 5-15 years (Mitchell and Preisler 1998), there will be an increase in the density and growth rate of the new stand thereby shortening the timeframe of establishment and subsequent growth than if these stands were not salvaged (Romme et al. 1986).

Please also review the responses to Comments 30 and 31.

L-19 Comment 48: Please map and define acres in the Project area where Bollenbacher et al. 2008 snag densities are currently being met and will be met after the Project.

Response – Comment 48

There is no requirement to map and/or define snag densities from Bollenbacher et al. 2008 in the project area. The Forest Plan snag standards are based on this source (Chapter 6, Corrected FEIS) and these standards will be met for the project.

See responses to Comments 30 and 31 of Letter 19.

L-19 Comment 49: Is it correct that alternative 2 allows harvest of trees greater than 15 inches dbh, as is noted in the RDEIS at 697?

The RFP snag direction, including as applied to the Project, violates the NFMA because there are no binding standards that protect viability of a diverse suite of snag-associated wildlife.

Response – Comment 50

Alternative 2 allows harvest of trees greater than 15 inches dbh. The Forest Plan ensures viability for wildlife through application of Forest-wide goals, objectives and standards. Forest Plan direction ensures management of a variety of habitats in various successional stages so as to ensure viability of a variety of species associated with those different habitats.

L-19 Comment 50: Wildlife Dependent upon Conifer Seeds: In the DEIS, we asked the agency to evaluate the impacts of logging and restoration on conifer seed availability to wildlife. This was not done in the RDEIS. Please evaluate this important impact of logging, including not just clearcutting but forest thinning in units and along meadows. How much will conifer seed production be reduced, and what is the estimated impact on migratory and nonmigratory songbirds, as well as forest mammals as the red squirrel, and important prey species for many forest carnivores and raptors.

Response – Comment 51

We disagree. Impacts the alternatives on conifer seed availability to wildlife were analyzed in the RDEIS under General Effects to Wildlife Habitat, and is also discussed in detail in this FEIS. Seed availability for wildlife is carried forward in the General Habitat discussion of Alternatives 2 and 3.

L-19 Comment 51: Northern Goshawk: Please define the current habitat conditions in the Project Area and what they will be after the Project for the goshawk as per the current best science or the southwest goshawk guidelines by Reynolds and others. Please use the same habitat categories as defined in Reynolds as well. This analysis is essential for the agency to disclose project impacts on this S3 Montana Species of Concern, as well as a former MIS for the BDNF and a species that indicates the health of numerous other wildlife species associated with older undisturbed forests that have high snag densities, high prey densities, and high production of conifer seed sources.

Please define why the Project Area isn't considered degraded for this former MIS because there are no documented nesting areas anywhere, when there should be 5 or more pairs. Why aren't 5 or more pairs expected to be occupying this landscape? There is clearly no hard look taken at the distribution of this species in the project area, a former MIS. It appears that as previously noted, the "restoration" purpose of this project was limited to anything that would provide commercial timber, not for ecosystem management. It appears that restoration of goshawk habitat is needed for this landscape, no more habitat removal.

Please define specifically how the 40 acre nest buffer mitigation measure will be applied if by the remote chance a logger reports a goshawk nest. Does the mitigation measure mean that the 40 acres will never be logged, or not logged until after the goshawks fledge? Does the no disturbance period mean that just the 40 acres will be protected, or if not, how much of a protection bugger will be provided. Please define the protection distance for great gray owls as well.

Please define what the impact of clearcutting and forest thinning in various treatments will have on goshawk prey species. How will foraging be affected? How was the impact on foraging habitat considered in project planning?

The southwest goshawk guidelines indicate that openings over several acres are not goshawk habitat. Please discuss the impact of clearcutting on this issue, and how much goshawk habitat will be directly eliminated in clearcuts. Please discuss how the size of clearcuts was considered in this elimination of goshawk habitat, and how it was addressed in project planning.

Response – Comment 52

The northern goshawk was removed from the Northern Region Sensitive Species list in 2007 based upon a review of the best available science regarding the ecological status of the species, the estimated amounts and distribution of habitat in the Region, the results of the 2005 Inventory across the Region, and the completion of a Northern Goshawk Regional Overview in 2007. The Regional Overview was revised in 2009, with new habitat estimates, a discussion of impacts of timber management and validity of activity timing restriction dates. This document is incorporated by reference. The 2009 Overview (considered best available science) found that based on recent broad-scale habitat and inventory and monitoring assessments conducted in the Northern Region, breeding goshawks and associated habitats appear widely distributed and relatively abundant on National Forest System lands (USDA Forest Service 2009c) and on the BDNF.

Authors of the Overview also looked at the effects of the current mountain pine beetle outbreak. They felt that the current outbreak and associated mortality poses uncertain risks to goshawk populations as a function of habitat change and loss. Data were lacking to comprehensively predict goshawk response to beetle outbreak, though some data does exist. Goshawk nest areas on the Ashley National Forest in Utah experienced a mountain pine beetle outbreak of approximately 100,000 acres in lodgepole pine in the early 1980s. Goshawks continued to nest successfully in lodgepole pine forests where up to 80% of the overstory trees were killed (Graham et al. 1999, in USDA Forest Service 2009c). The number of young that fledged on these territories from 1989 until 1996 was comparable to numbers fledged over the same time period for many other populations in the western United States. Local goshawk survey results (Kirkely 2010) show that a majority of northern goshawks (65% of 54 nests) are nesting in stands <10" dbh.

Because habitat is currently widespread and abundant, and the ERG evaluation suggests that goshawk nesting habitat will continue to be widespread and abundant over the next 50 years despite the current MPB outbreak, this analysis focuses on the Forest Plan standard for protection of known active nest sites (this standard also applies to great gray owls).

Analyses for northern goshawks have suggested that there is a 30,147-acre minimum viable population habitat threshold for the Region (Samson 2006). A recent analysis (Bush and Lundberg 2008) found that there is 363,593 acres of goshawk post-fledging habitat on the BDNF alone, meeting the Regional threshold. Assuming that all 1,704 acres (salvage and commercial thin DF) were suitable habitat (which it isn't due to mortality in the overstory lodgepole pine), this is less than 5% of the habitat present in the project area (32,440 acres of mid-to-late seral LPP and DF), and <1% of the habitat available on the Forest. Salvage and thinning would eliminate potential nesting habitat, as goshawks use denser stands for nesting. The Douglas-fir thinning units would still provide foraging habitat as the open stands would still provide habitat for forest-dwelling prey species.

One study in northern Idaho looked at the effects of timber harvest on goshawk reproduction (Moser and Garton, 2009). They found that goshawks occupied breeding areas that were altered by timber harvest and they did not move any further to alternate nests in subsequent years than birds in unharvested breeding areas, suggesting that the harvest within nesting areas was not enough to cause

goshawks to abandon breeding areas. Furthermore, goshawk nesting success and number of fledglings produced in subsequent years was not affected by timber harvesting.

Goshawks were removed from the R1 Sensitive Species list in 2007. Direction from the Regional Office states “although the goshawk is no longer a sensitive species, analysis of goshawks and their habitat should continue on Forests that use them as MIS” (USDA Forest Service 2007b, letter dated 17 July, 2007). The goshawk is not a MIS on the BDNF. Because of this, most of the analysis for goshawks is based on Forest Plan direction. Forest Plan vegetation management direction is designed to restore, maintain and retain a range of landscape conditions under which species evolved.

The Forest Plan includes a standard to mitigate management actions around known active nest sites of TES raptors, including goshawks. There are no known goshawk nest sites in the proposed units despite surveys as noted in Appendix B to Wildlife Report in the project file. In addition, a mitigation measure has been added to do pre-implementation surveys in areas with potential goshawk sightings and nests if specific units are harvested during the breeding season. Alternative 3 also includes a project design feature/mitigation for Unit 20T to survey prior to logging activities if logging and hauling occurs during the breeding season due to unconfirmed sightings.

The 2009 Northern Region Northern Goshawk Overview reviewed timing restrictions. Clough found a random sample of breeding goshawks (on the Beaverhead-Deerlodge National Forest) began incubating eggs on May 5 (± 1 day) and fledged by July 12 (± 1 day) (USDA Forest Service 2009c). The prohibited operating period used for this project is April 1 to August 15 and is more than adequate to protect active nest sites. This project includes a 40-acre nest buffer. Studies have found a range of nest area sizes (30 acres by Reynolds in the southwest (Reynolds et al. 1992), 1-32 acres by Squires and Ruggerio (1996) in Wyoming and 40 acres reported by Clough in west central Montana on the BDNF as discussed in the Overview) and this project nest area size reported from this part of the goshawks range.

L-19 Comment 52: Migratory Songbirds and Bats: There was basically no analysis of how the project will impact a large number of forest songbirds, from migratory to non-migratory species. It is not clear how a restoration project can be planned without addressing the needs of 50 plus forest birds, including a number of Montana Species of Concern. **The agency is violating the NFMA by failing to manage for viability of this diverse suite of species, most of which will be adversely impacted by the Project.**

Response – Comment 53

Effects to migratory birds were analyzed in detail in the Revised DEIS on pages 468-469 and in this FEIS under Species of Interest. There are no records of or habitat for the sensitive spotted or Townsend’s big eared bats in the project area.

L-19 Comment 53: Listed Species: **The RDEIS failed to complete consultation on either the grizzly bear or the Canada lynx**

The BDNF also failed to complete this consultation for the RFP, including the current best science for the grizzly bear. The agency is violating the ESA for both the RFP and the project as a result. There are currently no conservation measures (reasonable and prudent) being applied for either species in the Project Area as a result. There is no incidental take statement for either species on the Forest or in the Project Area as well. The impacts of the project are therefore unlimited for each species, in violation of the ESA.

There was no reasonable discussion for the use and potential use of the Project Area by either species, even though it is only 12 miles from designated critical lynx habitat, and grizzly bears are known to use the Continental Divide in this landscape for dispersal. Please provide a complete inventory of all known grizzly bear and lynx sightings, etc, for this broad landscape along the Continental Divide.

Response – Comment 54

This Final EIS includes the most up to date information on grizzly bear activity in the analysis area. The only federally listed wildlife species for the BDNF is the grizzly bear (threatened). Candidate species include yellow-billed cuckoo and greater sage-grouse. A candidate species under the ESA has no legal protection under the Act and no consultation with the FWS is required. Direction on occupied and unoccupied Canada lynx habitat was provided in 2009 to Region 1 Forests in a letter from the Regional Forester (USDA Forest Service 2009b). This letter directs unoccupied forests to consider lynx management direction using the “Northern Rockies Lynx Management Direction Standards and Guidelines Consistency Evaluation Table for Project Specific Activities”. See Appendix F.

L-19 Comment 55: Please define how the current open road density is affecting grizzly bear use of the project area.

The RFP operates as if the grizzly bear has been delisted. Since this is outdated science, the RFP needs to be revised in a supplemental NEPA analysis to address the changed conditions for the grizzly bear before projects are implanted in potential grizzly bear habitat.

The RFP has no binding legal standards to protect grizzly bears outside the Recovery area, as is demonstrated for the East Deerlodge Project. Binding legal standards need to be developed to protect the grizzly bear in areas of the BDNF where bears may occur in order to meet the requirements of the ESA as well as the NFMA.

Response – Comment 55

Impacts to grizzly bears from the current open road density were analyzed in the FEIS. Consultation with the US Fish and Wildlife Service on both the Forest Plan as well as this project have been completed. Please see the Wildlife Section of the FEIS and the Draft ROD for determinations of effects to listed species.

L-19 Comment 56: The BDNF is currently under consideration for the designation of the critical lynx habitat. The Project Area contains identified lynx habitat in LAUs. **Yet no Biological Opinion was provided as per the RFP or for the Project. The RFP also provides no binding legal standards to protect this threatened species, in violation of both the ESA and the NFMA.**

The BDNF is considered occupied by lynx. Yet in spite of this, **the East Deerlodge Project failed to evaluate project impacts as per the Northern Rockies Lynx Management Direction.** Only a few standards were addressed. The understory thinning of multistoried stand and the clearcut of lodgepole pine stands which will develop into future lynx habitat were not addressed. The habitat defined for lynx in the project area was not supported with any actual monitoring of snowshoe hares. **It is not clear why habitat would be restricted to spruce/fir stands, which are almost nonexistent in the Project Area.** Lodgepole pine stands are considered suitable lynx habitat, particularly if they contain hare habitat. The mountain pine beetle will continue to increase the value of these lodgepole pine stands for lynx over time. **The clearcutting of these stands will remove several thousand acres of developing lynx habitat, and will clearly be an adverse impact. This impact is never identified in the RDEIS, in violation of NEPA, ESA, and NFMA.**

Response – Comment 56

Please see the updated Lynx Analysis in the Wildlife Section of the FEIS for a full detailed discussion of effects to Lynx and Lynx habitat as well as compliance with applicable regulatory and legal requirements. Please also see the “Northern Rockies Lynx Management Direction Standards and Guidelines Consistency Evaluation Table for Project Specific Activities” in Appendix F of the FEIS.

L-19 Comment 57: The agency failed to ask the FWP whether lynx or grizzly bear occur in the Project Area.

The claims that the project will have no effects on lynx or grizzly bears is a violation of the APA, as this is implausible. For example, there was no analysis of how large openings, including some over several hundred acres, will affect the connectivity for the lynx. The agency clearly failed to take a hard look at the project will impact lynx habitat.

Response – Comment 57

Based on new information received from MT FWP in April 2012, grizzly bears were analyzed in detail in the FEIS. Lynx and Grizzly Bear presence /absence information is fully disclosed in the Wildlife Section of the FEIS in part due to comments received on the RDEIS such as this one.

20. Comments from Keith Gebo

Comment 1: Thanks for including a great option in your forest planning. Option #3 is a well thought out and easy option to choose. Thanks for keeping our quiet trails intact and even enhancing them!

Response – Comment 1

Thank you for reviewing the Revised DEIS and writing your response.

21. Capital Trail Vehicle Association - New Alternative

L 21-Comment 1: We feel that we (CTVA) are representative of the needs of the majority of visitors who recreate on public lands but are not be organized with a collective voice to comment on their needs during the public input process. These independent multiple-use recreationists include visitors who use motorized routes for weekend drives, mountain biking, sightseeing, exploring, picnicking, hiking, ranching, rock climbing, skiing, camping, hunting, RVs, shooting targets, timber harvesting, fishing, viewing wildlife, snowmobiling, accessing patented mining claims, and collecting firewood, natural foods, rocks, etc. Mountain bikers seem to prefer OHV trails because we clear and maintain them and they have a desirable surface for biking. Multiple-use visitors also include physically challenged visitors who must use wheeled vehicles to visit public lands. All of these multiple-use visitors use roads and motorized trails for their recreational purposes and the decision must take into account motorized designations serve many recreation activities, not just recreational trail riding. We have observed that 97% of the visitors to this area are there to enjoy motorized access and motorized recreation.

Adequate recreational opportunity for all visitors is the supreme issue that must be addressed by this action. The relative importance of recreation on a national basis is demonstrated by the Bureau of Economic Analysis statistics for spending on recreation. In 1979 the index for recreation spending was 32.537 (year 2000 = 100,

<http://www.bea.gov/national/nipaweb/TablePrint.asp?FirstYear=1979&LastYear=2004&Freq=Year&SelectedTable=33&ViewSeries=NO&Java=no&MaxValue=155.606&MaxChars=7&Request3Place=N&3Place=N&FromView=YES&Legal=Y&Land=>). In 2004, the index was 113.695 for an increase of 349%.

No other sector has increased this dramatically. Clearly, the public wants and needs adequate recreational opportunity **and this should be the over-arching theme of this evaluation and decision.**

Response – Comment 1

Making recreation considerations the primary focus of the project would not be consistent with the purpose and need for the project. Effects from the proposed actions on the recreation opportunities are disclosed in the recreation section of the FEIS.

L 21-Comment 2: Many federal actions have led to the continual closure of motorized recreational opportunities and access and at the same time the number of OHV recreationists has grown to 50 million and at the same time other outdoor activities have declined 18 to 25% (Journal of Environmental Management 80 (2006) 387-393, <http://www.redrockinstitute.org/uploads/PNAS.pdf> and <http://www.msnbc.msn.com/id/22998037/>). OHV registrations in Montana grew 24% from 2004 to 2005. Multiple uses of the forest are marginalized every time a forest plan or travel management plan comes up for action. The motorized closure trend has created significant cumulative effects and has reached the point where it is causing severe public distress. Reasonable alternatives to motorized closures must be pursued. The continual loss of motorized recreational opportunities is our primary concern. Because of the significant cumulative effect of motorized closures at this point in time, **we feel strongly that there can be “no net loss” of motorized recreational opportunities with the East Deer Lodge Valley Landscape Restoration Management Project.** The proposed closure of 21.9 miles of roads and 4.9 miles of motorized trails is contrary to the needs of the public. We would ask that this project address the attached checklist of issues and address the goals and needs identified. Using this checklist will help identify and address concerns and, hopefully, the needs of the public will be adequately met by implementing a more reasonable multiple-use alternative.

Response – Comment 2

Direct, indirect and cumulative effects of each alternative in regards to motorized recreation opportunities is disclosed in the recreation section. In summary both alternatives may impact some people who feel that closing any motorized route would impact their recreation opportunities. Of the routes in the project area, 89% would remain open to motorized use under both action Alternatives. If one defines multiple use in the recreation context as a “50/50” split of existing routes within the analysis area between motorized and non-motorized opportunities then indeed multiple use is not being achieved even with the reduction of motorized routes proposed in either action alternative. If the analysis were to measure “multiple use” as defined by the commenter then a significant number of miles of motorized routes would need to be closed in addition to the nominal decrease in routes proposed to be closed in both action alternatives. This overly-simplified and flawed approach to defining multiple use is not used in the analysis because it is inconsistent with law, regulation, and policy as well as the plain language of the Multiple Use and Sustained Yield Act.

No legal or regulatory requirements exist that mandate a particular level of motorized recreation opportunities on National Forest System Lands. Implying that because a certain segment of the population (not simply “the public”) prefers a type of recreational use (based on, in this case, increases in sales of motorized vehicles) that segment is entitled to a commensurate level of use of that type of recreation on public land is not consistent with law, regulation and policy.

L 21-Comment 3: The project area with its current level of motorized access and recreation is where residents from southwest Montana go to enjoy motorized recreation. The project area is where we go and what we do to create those memories of fun times with family and friends. Management of these lands for multiple-uses including reasonable motorized use allows the greatest enjoyment of these lands by the widest cross-section of the public to continue. These lands are designated as multiple-use lands. We ask that management for sharing of these lands for multiple-use be selected as the preferred alternative. **Sharing would include a 50/50 sharing and equal opportunity of non-motorized to motorized trails.**

Response – Comment 3

Please see response to your comment 2 above.

L 21-Comment 4: Our comments document that the current management trend towards massive motorized closures (25 to 75% of the existing routes) is not responsible to the public’s needs for motorized access and recreation and is contrary to the multiple-use management directives specified by

congress. The agency can no longer ignore that motorized access and recreation are the largest (over 50 million) and fastest growing group of visitors. The agency can no longer ignore the needs of motorized recreationists and act irresponsibly by continuing to close a large percentage of existing motorized access and recreation opportunities. The agency can no longer ignore the need for new motorized recreational opportunities. The agency can no longer ignore the significant cumulative effect that all of the motorized closures over the past 30 years have had on motorized recreationists. We cannot tell you how many times we have met motorized recreationists (many of them families from the project area) and they have asked us “What is going on?” This question will be even more prevalent if the travel plan is pushed by the public in a short time frame. In all of the hundreds of federal actions in the past 7 years, we have yet to see a meaningful evaluation this cumulative effect. It seems that both the BLM and Forest Service are using forest planning and travel management planning as an opportunity to close as many motorized recreational opportunities as fast as possible. **We are asking that this project establish a baseline evaluation and address this significant impact.**

Response – Comment 4

Cumulative effects are evaluated for the recreation resource at the project scale, see Spatial and Temporal Context for Effects Analysis section of the Recreation analysis in the FEIS. This analysis takes into account past closures authorized by previous decisions and displays the cumulative effect of all these travel management actions in the existing condition section of the analysis. The analysis of the No Action alternative shows that currently 92% of the routes in the analysis area are open to motorized use. Please also see response to comment 2 above.

L 21-Comment 5: Overall, we are extremely concerned about the unequal allocation of trail resources and we do not see anything in the document that justifies the current imbalance of 33% motorized trails in the Beaverhead-Deerlodge National Forest. The current alternative preferred by the Forest Service worsens this imbalance by eliminating high quality motorized trails. **The facts presented in our comments clearly supports a motorized trail allocation of 50% or greater.**

Response – Comment 5

There are 187.9 motorized routes and 16.1 non-motorized routes in the project area. The miles of routes available for motor vehicle use, in all alternatives, greatly outnumber the miles of non-motorized routes, by a 9 to 1 margin. Changes to allocations forestwide were addressed during Forest Plan Revision.

The action alternatives are designed to address some negative effects to the resources listed in the purpose and need for improvement and restoration stemming directly from the existence and use of routes currently open to motor vehicle use by proposing closures and decommissioning. Please see the response to your comment 3 above in regard to effects to motorized routes by open and closed road and trail mileages. Please also see response to your comment 1 which discusses how recreation considerations are not the purpose and need of the project.

L 21-Comment 6: The following facts are documented in the information and comments that we have provided:

1. The public has a great need for motorized trails.
2. Under existing conditions there are considerably more non-motorized trail opportunities than motorized trail opportunities.
3. The public needs more motorized trail opportunities and not less.
4. The Forest Service has proposed less motorized trail opportunities.

5. Motorized recreationists are the only ones to lose in this proposal.
6. Motorized recreationists are the only one to lose in every forest plan and travel plan action.
7. The National OHV policy was not intended to be a massive motorized closure process but that is how it is being used.
8. We are concerned about the significant cost of the road decommissioning project versus the use of those funds for maintenance of motorized routes. A better return on the funding in both environmental enhancement and recreational opportunities would be realized by investing in the same funding in maintenance of motorized routes. Questions that need to be adequately addresses include:
 - a. For how many years can motorized routes be maintained for public use and benefit versus the cost of decommissioning them?
 - b. How much more environmental enhancement could be realized by using the same funding for maintenance of motorized routes including water bars. The Stream Systems Technology Center found that installing water bars at a reasonable spacing was a very effective way to reduce the sediment discharge from trails and roads (July 2007 Stream Notes at <http://www.stream.fs.fed.us>). Many other best management practices are available to control sediment production at demonstrated by the bibliography at http://www.fs.fed.us/t-d/programs/wsa/pdfPubs/road_bmp.pdf .

Response – Comment 6

Please see response to comment 2 and 3 above. We appreciate your comments on Best Management Practices, which we do plan to use in completing route maintenance and improvements on haul routes in the EDLV project area. We have used a similar “BMP” reference distributed by the State, available through the State DNR website @ <http://dnrc.mt.gov/Forestry/Assistance/Practices/bmp.asp>

The economics section of the FEIS considered include maintenance, improvement, closure, and decommissioning costs involved in the transportation system decision portion of this project. Economics are not the only factor used in reaching these decisions. Please see the Recreation and Aquatics sections for effects analyses by alternative.

A comparative analysis of maintenance versus decommissioning costs shows that although the up-front investment in decommissioning costs may be higher, the cost of annual maintenance on routes open to motorized use is higher due to the recurring nature of these expenditures. The cost of decommissioning a road or trail is a one-time investment that permanently decreases or eliminates problems that negatively affect other resources (improving those resources is the purpose of this project) whereas maintenance is a recurring annual investment that mitigates but often times does not totally eliminate the negative impacts to other resources. This is in part because motor vehicle use on roads and trails continually degrades that road or trail facility including erosion, rutting and other incremental degradations of the road or trail surface from multiple passes of vehicle tires. Added up, the total cost over many years of a less costly investment in annual maintenance multiplied by many years is more costly than a one-time more costly investment in decommissioning. This fact, combined with declining budgets for road and trail maintenance across the Forest Service as well as an increased skepticism and reluctance to fund investments in public infrastructure at the national level is the primary reason why motorized route closures are occurring. We do not disagree that with an unlimited funding stream for road and trail maintenance that many routes (depending upon location, surface, and other engineering features considered) could in theory be maintained into perpetuity in a condition that they do not impair other resources. Currently this theoretical scenario is not reality; in fact the opposite is true: funding for maintenance has been and continues to be in decline. This project proposal was

carefully developed to identify motorized routes with the highest potential to negatively impact aquatic and wildlife resources and proposals in the two action alternatives were developed to address these routes to meet the purpose and need.

L 21-Comment 7:

9. Lack of funding was used as a reason in the Forest Plan to close motorized routes. Now the agency is able to readily find funding to decommission motorized routes. This inconsistency greatly concerns motorized recreationists and we encourage the agency to give the pursuit of maintenance funding a higher priority than the pursuit of decommissioning funding. Environmental justice and socio-economic issues associated with this inconsistency must be adequately addressed.

Response – Comment 7

Federal appropriations law does not allow federal agencies to spend dollars on expenditures not tied directly to the Budget Line Item (BLI) and detailed budget direction associated with that BLI. What this means in the context of your comment is that in part you are correct: the budget trends for road and trail maintenance are declining however funding is available for decommissioning and obliteration so as to decrease the long-term expenses associated with the backlog of road and trail maintenance while simultaneously addressing some of the resource issues that stem directly from the roads and trails that currently exist and are not being maintained. The potential benefit to motorized recreationists from this approach however is as follows: if the agency is able to focus limited dollars for maintenance on fewer open routes, those routes should in theory be more likely to be maintained in a user-friendly condition. This benefits both the recreationist who uses them as well as other resources such as aquatics. Please also see the response to your Comment 6 above.

L 21-Comment 8:

10. All Forest Service Planning involving OHV routes must meet the requirements of the 3- State OHV Decision. Specifically, the 3-State OHV Decision was intended to designate routes for motorized use and required the use of site specific data and analysis to designate motorized routes. The 3-State record of decision refers to the commitment and requirement for site-specific analysis 57 times (<http://www.fs.fed.us/r1/dakotaprairie/projects/ohv-tristate-rod-1-01.pdf>). Clearly site-specific analysis of all factors involving OHV routes is a mandatory requirement and a significant commitment made by the agency.

Response – Comment 8

This FEIS constitutes the site-specific analysis referenced in the Tri-State OHV ROD. The site specific analysis regarding the proposed motorized route closures is summarized in the Comparison of Transportation Network Following Alternative Actions table. Direct, indirect and cumulative effects of each alternative in regards to motorized recreation opportunities are disclosed in the Recreation section. Please also read the response to L21-Comment 1 which discusses how recreation considerations fit within the larger purpose and need.

L 21-Comment 9: As shown in the attached comments, there is a great shortage of ATV and motorcycle trails in the Beaverhead-Deerlodge National Forest. As shown graphically on the Summer Recreation Allocations Map from the BDNF Forest Plan, over 80% of the forest is now non-motorized and defacto wilderness.

The NVUM and Southern Research Station reports cited later in our comments prove that there are 400,707 OHV visitors to the Beaverhead-Deerlodge National Forest and 15,000 wilderness visitors. The ratio of trail users is 26.71 motorized to 1 non-motorized yet the balance of existing trails is 33%

motorized to 67% non-motorized. Clearly there is an imbalance of opportunity that justifies more (not less) motorized recreational opportunities.

For this reason, we strongly recommend and support the development of a Pro-Recreation Alternative. The proposal by the Beaverhead-Deerlodge National Forest does not meet this definition of a Pro-Recreation Alternative. **A Pro- Recreation Alternative would include the following characteristics in addition to the current proposal:**

1. The use of “unauthorized trails or roads” is not an appropriate term as many of these routes were created during periods going back to the 1800s when the forest was managed without designated routes, cross-country travel was allowed, and access and use of the forest was encouraged. The use of “unauthorized trails or roads” is an inaccurate representation of the management conditions and uses allowed in the past and we request that this term be dropped from the text.
2. We are very concerned that the current text and maps does not adequately and easily disclose the motorized routes to be closed. Order to meet NEPA requirements for adequate public disclosure, each alternative map must show each motorized route that is proposed to be closed. The standard used in many travel plans has been to show those motorized routes proposed to be closed by an alternative with red lines. The tables for each alternative also need to clearly identify an each existing motorized route that is proposed to be closed.
3. Dispersed camping within 300 feet of all existing routes.
4. Use of seasonal closures, where required, to protect the environment and wildlife with the intention of keeping motorized routes open for the summer recreation season.
5. All of the existing routes are needed as OHV routes due to the cumulative effects of all other closures. Additionally, The motorized closures in the Beaverhead Deerlodge National Forest done as part of past actions including the forest plan is part of a significant negative cumulative effect that must be reasonably mitigated in fairness to the needs of the public.
6. Additional OHV routes are needed to address the growing popularity of OHV recreation and the greater needs of the public for access and motorized recreation.
7. OHV trails will see many times the use compared to non-motorized trails.
8. In order to reasonably meet the needs of the public for motorized recreational opportunities we request that the proposed alternative include the following:
 - a. Interpretative routes to preserve the mining heritage in the area.
 - b. Provides the type of long-distance figure 8 routes, loops and side destinations desired by OHV recreationists
 - i. Loops ranging from 20 to 60 miles
 - ii. Many stops and side destinations
 - iii. Documents and preserves the historic nature of the area
 - iv. Additional use of dual-use routes so that OHVs can connect with trails systems.
 - v. Grants could be used for signing at each site and the development of interpretative literature, brochures, and maps.
 - vi. Grants could be used where required for route improvements.
9. The Travel Plan decision is based on improper implementation of the Roadless Rule. The Final Roadless Rule published on January 5, 2001

(http://roadless.fs.fed.us/documents/rule/roadless_fedreg_rule.pdf) specifically stated “The proposed rule did not close any roads or off-highway vehicle (OHV) trails”. The agency must honor this commitment.

a. The Final Roadless Rule published on January 5, 2001

(http://roadless.fs.fed.us/documents/rule/roadless_fedreg_rule.pdf) specifically stated “The proposed rule did not close any roads or off-highway vehicle (OHV) trails”. The agency must honor this commitment. This commitment was recently upheld as part of appeal Number 07-05-10-0005 dated January 10, 2008 for the Smith River NRA travel management plan in the Six Rivers National Forest filed by Blue Ribbon Coalition (<http://www.sharetrails.org/releases/media/?story=556> and www.sharetrails.org/files/SmithRiverNraBrcAppealDecisionJan14.pdf). Therefore, all (100%) of the remaining public lands including roadless areas must be managed for multiple-uses in order to avoid further contributing to the excessive allocation of resources and recreation opportunities for exclusive non-motorized use.

b. Recommended Wilderness Areas. In *Montana Wilderness Assoc. v. U.S. Forest Service*, the U.S. District Court of Montana found that Congress required the Forest Service to strike--and maintain--a balance between wilderness character and motorized use in WSAs established by that Act. Given that Congress envisioned motorized uses in Wilderness Study Areas they established, the Forest Service's cannot exclude motorized uses in Recommended Wilderness Areas (RWAs). The existence of motorized uses does not preclude an area from being designated as an RWA. Therefore, the Forest Service's rationale eliminating motorized uses in RWAs is arbitrary and capricious. The Forest Service does not have an adequate rationale for the level of motorized or mountain bike use that would disqualify an area from being a RWA. In the Eastern Wilderness Act, Congress designated areas Wilderness that contained motorized uses, structures, maintained roads and even sections of paved roads. The Forest Service has not adequately studied the level of motorized uses that actually precludes Congress from designating an area as Wilderness.

Response – Comment 9

The alternative submitted in this comment was considered but not analyzed in detail for reasons further explained in the Development of Alternatives Section of Chapter 1 of the FEIS.

Forestwide recreation and travel management was analyzed and addressed during Forest Plan Revision. We responded to the 495 concerns in letter 925 submitted by CTVA during that process. Those responses regarding forest wide travel planning were available on the web from 2009 to 2012 and are still available in an excel format by request.

L 21-Comment 10:

10. In order to reasonably meet the needs of the public for motorized recreational opportunities we request the following routes be connected to create valuable motorized loops:

- a. Baggs Creek Trail
- b. Airplane Park Trail
- c. Cliff Mountain Trail
- d. Others that are reasonable.

Response – Comment 10

All or parts of these routes are inside a non-motorized allocation as determined by the Forest Plan. Alternative 1 discloses the effects of no change in motorized and non-motorized routes. The decision

space in this project does not include changing those allocations. Your concerns about those allocations were addressed during revision as explained in the response immediately above.

L 21-Comment 11:

11. Trails that should be kept open to motorized include:

- a. Baggs Creek Trail
- b. Airplane Park Trail
- c. Cliff Mountain Trail

Response – Comment 11

Please see the response to your Comment 10 above.

L 21-Comment 12:

12. A Pro-Recreation alternative is needed to meet NEPA requirements for consideration of all reasonable alternatives. A Pro-Recreation alternative is need to provide mitigation for the significant negative impacts on motorized access and motorized recreation from the forest plan decision that closed 100 miles of roads and 200 miles of high quality OHV trails. An example of a Pro-Recreation alternative is shown on the attached map. Certainly this is a reasonable alternative that must be evaluated under NEPA.

As documented in our comments, every Forest Service travel planning action including the Beaverhead Deerlodge Forest Plan has resulted in less motorized access and motorized trails. Motorized recreationists have become extremely frustrated with this disconnect between their needs and Forest Service actions. We often hear others say that the Forest Service is going to close our trails regardless of what we say or do. We are very concerned about the perception of a federal agency with a stated commitment to equal program delivery. We urge the Forest Service to address this significant issue by developing a preferred alternative based on a Pro-Recreation alternative.

A Pro-Recreation alternative is viable and needed by the public. The reasons and issues presented by motorized recreationists including these comments are adequate justification to develop and support a Pro-Recreation alternative. Other motorized recreationists are available to develop and support a Pro-Recreation alternative if the agency would engage them. Again, we urge the Forest Service to address this situation and restore public confidence in the agency by developing and selecting a Pro-Recreation alternative that provides equal program delivery by converting roads to OHV trails and allocating at least 50% of the trails to motorized use.

Response – Comment 12

Please see response to your Comment 5 and others above which discuss how recreation considerations are analyzed as well as responses addressing the purpose and need for this project described in the FEIS.

L 21-Comment 13 PRA: The overall allocation of existing non-motorized versus motorized access and trail riding opportunities in the Beaverhead-Deerlodge National Forest is a does not reasonably meet the needs of the public for motorized access and the recreational needs of motorized recreationists. We request that this data be used to guide the decision-making to a preferred alternative that adequately meets the needs of the public by increasing motorized recreational opportunities in the project area.

Response – Comment 13

Please see responses to several previous comments that address the exact subject matter of this comment.

L 21-Comment 14: The total Beaverhead-Deerlodge National Forest is covers (sic) 3,364,000 acres. The percentage of the total forest used by roads, ATV trails, and single-track motorcycle trails under existing conditions is respectively, 0.1754%, 0.0088%, and 0.0021%. Additionally, the existing road density is 0.772 mile per square mile which is far less than the 1 mile per square mile criteria.

The total area of roads and trails under Existing Conditions far less than 1% of the project area. The total area used by motorized routes under Existing Conditions is 6270 acres or 0.1864% of the 3,364,000 acre area. Therefore, the area used Under Existing Conditions is relatively insignificant and is an entirely reasonable level of use on multiple-use lands.

The reduction under the proposed action produces a significant impact on the public's ability to access and recreate and is not a reasonable level of use for lands designated for multiple-use by congress.

Furthermore, a Pro-Recreation Alternative that increases motorized access and motorized recreational opportunities in the East Deer Lodge Valley Landscape Restoration Management Project is an entirely reasonable alternative for these multiple-use lands.

Response – Comment 14

Please see responses to several previous comments that address the exact subject matter of this comment.

L 21-Comment 15: . . .Additionally, the (OHV) rule preserves existing non-motorized routes by not allowing them to be converted to motorized routes and it does not state anywhere that non-motorized travel and experiences were to be significantly enhanced by a wholesale conversion of motorized routes to non-motorized routes. We request that the intention of the final OHV Route Designation rule be followed by the East Deer Lodge Valley Landscape Restoration Management Project decision and that the rule not be used inappropriately as an action to create wholesale motorized closures and a wholesale conversion of motorized to non-motorized routes.

Response – Comment 15

It is unclear exactly what "OHV Rule" the commenter is referring to. However if the commenter is referring to the 2005 Travel management Rule (TMR) the assertions made in the comment are incorrect. Furthermore, many travel management decisions promulgated under the 2005 TMR do not "convert" motorized routes to non-motorized (although that action is a perfectly acceptable and legal action under the rule) rather they totally decommission and/or obliterate the route. Vague references to rules and unsubstantiated claims about actions that said rules do or do not allow are not helpful to this site-specific project analysis.

L 21-Comment 16: It is not environmentally and socially responsible to squeeze motorized recreationists into the small possible numbers of areas and routes, yet this is the goal being pursued by the Beaverhead-Deerlodge National Forest. There is also a significant public safety aspect associated with squeezing everyone into a small area as accidents will increase with too many motorized recreationists on too few routes. We request that these significant issues be adequately addressed

Response – Comment 16

Please see responses to several previous comments that address the exact subject matter of this comment. The claim that either of the two action alternatives would significantly alter the geographic area and/or miles of route available for motorized use is not supported by the analysis in the FEIS. Claiming that this is true and then to imply that this will increase safety issues is a false claim that is not taken lightly by the Forest Service. Self-education within the motorized community regarding the importance of observing basic road safety rules such as driving at an acceptable speed, adhering to

manufacturers vehicle specifications for load limits and rider abilities, and the importance of personal protective gear such as helmets would go a long way in addressing the safety issue as well as reduce the need for law enforcement and emergency responder personnel that often respond to accidents, many of which could be prevented by adhering to basic safety measures.

Letter 22. Comments from Barbara Gregovich

Comment 1: I support Supervisor Myers' plan (Alternative #3) to help restore healthy watersheds and repair trails vital to backcountry hunters, hikers, mountain bikers and equestrians.

Response – Comment 1:

Thank you for reviewing the alternatives and writing your response.

Letter 23. Comments from National Park Service, Grant-Kohrs Ranch National Historic Site (Rotegard)

Comment 1: The Grant-Kohrs Ranch National Historic Site supports the preferred Alternative 3 in the Revised Draft EIS for the East Deer Lodge Valley Landscape Restoration Management Project.

In particular, we appreciate the attention and coordination with the Montana State Historic Preservation Office in regards to the cultural resources discovered on this project. We also appreciate you addressing concerns as it pertains to the scenic resources.

We also support Alternative 3 based on the hydrology data even though short term sediment delivery might increase during the project, the potential for long term total sediment delivery reductions due to road closers is significantly greater than Alternative 2.

Finally, Alternative 3 provides for more water development areas, which can reduce livestock impacts to aquatic/riparian habitat.

Response – Comment 1

Thank you for reviewing the Revised DEIS and writing your response. We appreciated the responsiveness of you and your staff to our request for past, present, and reasonably foreseeable future action on NPS managed lands for consideration in the cumulative effects.

Letter 24. Montana Trail Vehicle Rider Association -

L 24-Comment 1: We strongly recommend and support the development of a Pro-Recreation Alternative. The proposal by the Beaverhead-Deerlodge National Forest does not meet this definition of a Pro-Recreation Alternative. A Pro-Recreation Alternative would include the following characteristics in addition to the current proposal:

1. The use of “unauthorized trails or roads” is not an appropriate term as many of these routes were created during periods going back to the 1800’s when the forest was managed without designated routes, cross-country travel was allowed, and access and use of the forest was encouraged. The use of “unauthorized trails or roads” is an inaccurate representation of the management conditions and uses allowed in the past and we request that this term be dropped from the text.

2. We are very concerned that the current text and maps does not adequately and easily disclose the motorized routes to be closed. Order to meet NEPA requirements for adequate public disclosure, each alternative map must show each motorized route that is proposed to be closed. The standard used in many travel plans has been to show those motorized routes proposed to be closed by an alternative with red

lines. The tables for each alternative also need to clearly identify an each existing motorized route that is proposed to be closed.

3. Dispersed camping within 300 feet of all existing routes.
4. Use of seasonal closures, where required, to protect the environment and wildlife with the intention of keeping motorized routes open for the summer recreation season.
5. All of the existing routes are needed as OHV routes due to the cumulative effects of all other closures. Additionally, The motorized closures in the Beaverhead Deerlodge National Forest done as part of past actions including the forest plan is part of a significant negative cumulative effect that must be reasonably mitigated in fairness to the needs of the public.
6. Additional OHV routes are needed to address the growing popularity of OHV recreation and the greater needs of the public for access and motorized recreation.
7. OHV trails will see many times the use compared to non-motorized trails.
8. In order to reasonably meet the needs of the public for motorized recreational opportunities we request that the proposed alternative include the following:
 - a. Interpretative routes to preserve the mining heritage in the area.
 - b. Provides the type of long-distance figure 8 routes, loops and side destinations desired by OHV recreationists
 - i. Loops ranging from 20 to 60 miles
 - ii. Many stops and side destinations
 - iii. Documents and preserves the historic nature of the area
 - iv. Additional use of dual-use routes so that OHVs can connect with trails systems.
 - v. Grants could be used for signing at each site and the development of interpretative literature, brochures, and maps.
 - vi. Grants could be used where required for route improvements.
9. The Travel Plan decision is based on improper implementation of the Roadless Rule. The Final Roadless Rule published on January 5, 2001 (http://roadless.fs.fed.us/documents/rule/roadless_fedreg_rule.pdf) specifically stated "The proposed rule did not close any roads or off-highway vehicle (OHV) trails". The agency must honor this commitment.
 - a. The Final Roadless Rule published on January 5, 2001 (http://roadless.fs.fed.us/documents/rule/roadless_fedreg_rule.pdf) specifically stated "The proposed rule did not close any roads or off-highway vehicle (OHV) trails". The agency must honor this commitment. This commitment was recently upheld as part of appeal Number 07-05-10-0005 dated January 10, 2008 for the Smith River NRA travel management plan in the Six Rivers National Forest filed by Blue Ribbon Coalition (<http://www.sharetrails.org/releases/media/?story=556> and www.sharetrails.org/files/SmithRiverNraBrcAppealDecisionJan14.pdf). Therefore, all (100%) of the remaining public lands including roadless areas must be managed for multiple-uses in order to avoid further contributing to the excessive allocation of resources and recreation opportunities for exclusive non-motorized use.
 - b. Recommended Wilderness Areas. In *Montana Wilderness Assoc. v. U.S. Forest Service*, the U.S. District Court of Montana found that Congress required the Forest Service to strike--and maintain--a balance between wilderness character and motorized use in WSAs established by

that Act. Given that Congress envisioned motorized uses in Wilderness Study Areas they established, the Forest Service's cannot exclude motorized uses in Recommended Wilderness Areas (RWAs). The existence of motorized uses does not preclude an area from being designated as an RWA. Therefore, the Forest Service's rationale eliminating motorized uses in RWAs is arbitrary and capricious. The Forest Service does not have an adequate rationale for the level of motorized or mountain bike use that would disqualify an area from being a RWA. In the Eastern Wilderness Act, Congress designated areas Wilderness that contained motorized uses, structures, maintained roads and even sections of paved roads. The Forest Service has not adequately studied the level of motorized uses that actually precludes Congress from designating an area as Wilderness.

10. In order to reasonably meet the needs of the public for motorized recreational opportunities we request the following routes be connected to create valuable motorized loops:

- a. Baggs Creek Trail
- b. Airplane Park Trail
- c. Cliff Mountain Trail
- d. Others that are reasonable.

11. Trails that should be kept open to motorized include:

- a. Baggs Creek Trail
- b. Airplane Park Trail
- c. Cliff Mountain Trail

12. A Pro-Recreation alternative is needed to meet NEPA requirements for consideration of all reasonable alternatives. A Pro-Recreation alternative is need to provide mitigation for the significant negative impacts on motorized access and motorized recreation from the forest plan decision that closed 100 miles of roads and 200 miles of high quality OHV trails. An example of a Pro-Recreation alternative is shown on the attached map. **Certainly this is a reasonable alternative that must be evaluated under NEPA.**

Response – Comment 1

The alternative submitted in this comment was considered but not analyzed in detail for reasons further explained in the Development of Alternatives Section of Chapter 1 of the FEIS. Please also see responses to comments submitted by CTVA that appear to be verbatim to these.

L 24-Comment 2: As documented in our comments, every Forest Service travel planning action including the Beaverhead Deerlodge Forest Plan has resulted in less motorized access and motorized trails. Motorized recreationists have become extremely frustrated with this disconnect between their needs and Forest Service actions. We often hear others say that the Forest Service is going to close our trails regardless of what we say or do. We are very concerned about the perception of a federal agency with a stated commitment to equal program delivery. We urge the Forest Service to address this significant issue by developing a preferred alternative based on a Pro-Recreation alternative.

Response – Comment 2

Please see responses to comments submitted by CTVA that appear to be verbatim to these.

L 24-Comment 3: A Pro-Recreation alternative is viable and needed by the public. The reasons and issues presented by motorized recreationists including these comments are adequate justification to

develop and support a Pro-Recreation alternative. Other motorized recreationists are available to develop and support a Pro-Recreation alternative if the agency would engage them. Again, we urge the Forest Service to address this situation and restore public confidence in the agency by developing and selecting a Pro-Recreation alternative that provides equal program delivery by converting roads to OHV trails and allocating at least 50% of the trails to motorized use.

Response – Comment 3

Please see responses to comments submitted by CTVA that appear to be verbatim to these. In particular see response to comment 2 of letter 21.

Letter 25. Comments from Maryalice Chester

Comment 1: Please add my support for alternative #3 to restore watersheds & repair trails in the Kading area. Many folks from Helena have joined me in hikes in this area. If there are opportunities for volunteer trail work we would like to be informed

Response – Comment 1

Thank you for reviewing the document and writing your response.

Letter 26. Comments from Montana Trout Unlimited (Gibson)

Comment 1: Montana TU supports Alternative 3, the preferred alternative, which includes 57 timber harvest units totaling 2705 acres, the use of stewardship contracting for all timber harvest, vegetative and aquatic treatments on 19 restoration units totaling 8,768 acres, and additional restoration activities throughout the project area not specifically tied to timber and restoration units.

We look positively on Alternative 3 as a clear improvement over the previously proposed Alternative 2 in the following regards:

Riparian area vegetation/aquatic treatments (riparian tree felling, large woody debris enhancement, log worm fencing) are targeted better.

Off-stream watering structures for livestock are increased to seven new structures, reducing future grazing impact on streams.

The number of road culverts impeding fish movement to be removed or replaced has increased from 7 to 12, thereby addressing most of the aquatic passage issues in the project area.

Additions of new roads to the system is lower than Alternative 2 (now only 1.2 miles), while road conversion to trails and the decommissioning of unneeded motorized trails goes up slightly to 5.1 miles.

Response – Comment 1

Thank you for supporting these elements of Alternative 3. Please review the updated Hydrology and Aquatics analysis in the FEIS.

Comment 2: However, Montana TU would like to suggest that the district take a second look at the following:

The total of perennial stream miles left with adjacent roads is reduced in these watersheds: Cottonwood (Fred); Peterson, Orofino, Dry Cottonwood, and Girard, from 288 to 235 miles, a reduction of 19%. We encourage the forest to identify additional opportunities to reduce road miles, especially in RCAs along streams supporting native westslope cutthroat.

Proposed road densities in general show a modest reduction from the existing condition on a project scale. Although road densities move toward the desired condition identified in the forest plan, the project does not attain the goal. We suggest the agency identify additional reductions in road density that could be achieved, either in this project, or in the future, that would attain the forest plan goal. The goal in the plan results from significant analysis and public comment. Therefore, it seems reasonable for the forest to identify how it could be achieved in the large landscape of this project.

Long-term sediment supply from roads to perennial streams is expected to go down 34 percent, which is significantly better than the original proposal (Alternative 2 was only 19 percent reduction). Some significant short-term sediment delivery increases have been identified during project implementation. While some short-term increases are expected, we suggest revisiting opportunities to implement additional BMP's, reducing season of haul number of haul trips related to log removal to possibly further reduce short-term impacts, especially in watersheds where cutthroat trout occur. A further reduction will benefit aquatic communities, as well as reduce the potential for legal challenges to the project based on modeled sediment delivery.

Timber harvest units exist within Fred Fish Key Watershed. Montana TU would suggest that only ridgetop logging occur within the boundaries of this Key Watershed to ensure that sediment impacts to important tributaries is minimal. Specifically, a site visit revealed springs and seeps on the north facing slope to the south of Baggs Creek. We hope that timber units 68T and 86T do not encroach on this sensitive area.

The Beaverhead-Deerlodge Forest Plan uses INFISH standards as the minimum requirement for riparian protections forest wide. With minimal site specific detail for timber units, Montana TU expects that INFISH standards will be used when designing timber projects in the project area.

Response – Comment 2

Please review the updated Hydrology and Aquatics analysis in the FEIS for a discussion of some of these issues including revised figures on estimated sediment delivery to streams from the alternatives. Regarding additional opportunities to reduce total road stream miles, the alternatives have not been revised to include additional opportunities for this type of work, however that does not preclude new projects being proposed that could accomplish this. One change of note to Alternative 3 between the RDEIS and this FEIS is the specification of winter logging for a number of timber units as described in the FEIS Chapter 2 alternative descriptions. With regard to the location of timber units in the Fred Fish Key watershed, please see Figure 5 in the Hydrology section. Figure 5 displays the location of timber units, many of which are in fact high above streams on ridgetops far away from live water. Zero sediment introduction from timber units is predicted from implementation of ground disturbing actions within these units. This does not include potential sediment generated from log hauling on roads. A design feature is incorporated into both action alternatives to protect springs, seeps and wet areas within units from disturbance.

Comment 3: Montana TU supports the proposed improvements to Forest Road 9455 so that it serves as the primary haul route for timber harvest from the southern portion of the project area. Forest Rd. 85, previously planned as the haul route, is unsafe, has serious sediment production issues, and is difficult to maintain without damaging the adjacent stream corridor.

Montana TU supports the closure of road 5163 near the north fork of Perkins Gulch; but believes this road segment should be fully decommissioned to make it unusable. This road connects to private roads and may continue to get illegal use if left in place. If the road is closed and left in place (not maintained), it may deteriorate further and re-initiate sediment discharge into the adjacent stream.

Montana TU recommends that the activities on UR8-83, a non-system road, include major improvements in the drainage to reduce sediment discharge to nearby the North Fork of Dry Cottonwood Creek. Table 12, p. 48 only shows “Add UR route to system.”

Response – Comment 3

Thank you for your comments regarding these roads. We have considered the condition and the extent of improvements needed for all roads proposed for log hauling in the roads package that was developed for this project. The cost and effectiveness of those improvements will be considered prior to making a final decision. The draft ROD tentatively selects FSR 9455 for log hauling out of the southern portion of the project area. The closure of FSR 5163 and conversion of this road to Maintenance Level 1 status will prevent illegal use based on immovable barriers to prevent motorized vehicle incursion. Furthermore, conversion to ML 1 status involves significant road drainage work to “waterproof” the segment so that it can be left in an unused condition for long periods of time without further degradation of the road prism and subsequent sedimentation. Please see the transportation report for further detail on the actions associated with conversion of this route to ML 1 status.

Comment 4: A minor error on p. 74: the Mainstem Dry Cottonwood Creek population of cutthroat trout is slightly hybridized (LESS THAN < 10%) with Yellowstone cutthroat..... see data in MFISH online database, MT FWP (i.e. this population is greater than 90% westslope cutthroat genetics).

Response – Comment 4

Thank you for pointing out this error. We’ve corrected it in the FEIS.

Letter 27. Comments from Bernie Lionberger, for Hank Flatow, Last Chance BCH FORM 1

Comment 1: We strongly support the preferred alternative which will restore a sustainable backcountry trail system in the Cliff Mountain and Baggs Creek are of the Electric Peak Backcountry.

We . . . are pleased that some of our concerns about restoring and linking viable trails have been addressed

First we wish to commend the collaborative approach of the Pintler Ranger District, Beaverhead-Deerlodge national Forest and the stewardship partners.

The focus of our comments concern the Baggs Creek and Cliff Mountain trail system within the Electric Peak Summer Non-Motorized Backcountry Area.

Though most of the project area is motorized, according to the Draft EIS, 21% of the EDLV Project Area, within the Electric Peak Roadless Area is allocated to Summer Non-Motorized Management under 2009 Beaverhead-Deerlodge National Forest Plan.

Forest Plan recreational goals for this part of the project area require a functioning system of trails in non-motorized summer settings that will provide quality opportunities for biking, hiking, and mule or horseback riding. The Forest Plan also sets a goal of providing a “system of trails designated for non-motorized uses. . .” The preferred alternative will result in much-needed restoration for thee linked trails or segments.”

Alternative 3 will restore Cliff Mountain Trail #8047. This is described in the DEIS analysis as “virtually non-existent” between Baggs Creek and Airplane Park.

Alternative 3 will rehabilitate FR 5182 between Baggs Creek and the Helena National Forest boundary, replacing severely-eroded sections of this user-created track with a sustainable single track trail built to grade and consistent with forest plan goals for recreation.

Alternative 3 will restore 5.7 miles of Baggs Creek Trail, which links to Cliff Mountain Trail 8047 and FR 5182.

This work is necessary to close the gap between forest plan recreation goals and long-neglected trail conditions on the ground. Restoring the “virtually non-existent” section of Cliff Mountain Trail #8047 and washed-out FR5182 to a sustainable single-track trail also would link Baggs Creek Trail north and south along the crest with popular backcountry trails and access points at the Middle Fork Cottonwood and Helena National Forest. Linking and restoring trails along the Cliff Mountain - Electric Peak Crest is the number one priority of Montana High Divide Trails Working Group.

We support the preferred alternative #3 and stand ready to partner with you and your staff, to raise additional trail funds and provide skilled and enthusiastic trail volunteers to help restore this backcountry trail system.

Response – Comment 1

Thank you for your response and support of the project.

Letter 28. Dick Artley

L 28-Comment 1 I have reviewed the Revised DEIS for the East Deer Lodge Valley Landscape Restoration Management Project and I find that it contains more violations of law than the DEIS. As a communal owner of the Beaverhead-Deerlodge National Forest I am disturbed that you are proposing to harm my natural resources to provide an opportunity for corporate profit.

Please answer this question: Do you ever contemplate projects that do not serve your masters who run the resource extraction corporations?

Response – Comment 1

The purpose and need of the project is to implement several Forest Plan Goals and Objectives including timber management but also aquatic and wildlife goals. It would seem curious that the corporate extraction industries would be pushing improvement of aquatic resources and wildlife habitat therefore this assertion is incorrect. However this response does not directly answer your question. The answer is yes, we do.

L28-Comment 2: The attachments to these comments include the views of over 500 independent, unbiased Ph.D. biological scientists who describe the resource damage inflicted by commercial timber sale activities and road construction taken in any location, on any topography, at any elevation with any vegetative conditions. Indeed, there is no location where a commercial timber sale could be implemented that's exempt from the resource damage described by these scientists. This includes the East Deer Lodge Valley project.

0 effects of the sale . (sic) . .

After reading the quotes in the attachments to this letter the Responsible Official should understand that the scientists intend for their professional views to apply to all commercial timber sales.

Opposing Views Source Documents Comment: One cannot find meaningful scientific literature that is site-specific. The source documents for the opposing views are not site-specific. **If the Responsible Official refuses to respond to the opposing views because the source literature for the opposing view is not site-specific or does not relate directly to the East Deer Lodge Valley project, then the Responsible Official must remove all literature in the References section of the Revised DEIS that are not site specific to this project.**

Response – Comment 2

The literature the IDT cites is based on the relevance of the study to specific analysis components they know are involved in the projects. There may be other literature and studies that could apply but the resource specialists cite the work they know applies to this area and provide the best comparisons upon which to base their conclusions of effects.

Timber Harvest Comment 1: The Proposed Action Described in the Revised DEIS for the East Deer Lodge Valley Project Indicates that 12,341 Acres (19.3 square miles) of National Forest Land will be Commercially Logged. The East Deer Lodge Valley project is not a multiple use project because it damages “the various renewable surface resources of the national forests” in order to extract trees to generate profit for the purchaser.

Response – Timber Harvest Comment 1

The purpose and need of this project is to contribute to the attainment of forest-wide goals and objectives for the following resources: timber management, vegetation, aquatics and wildlife. See Chapter 1 for further details. It is unclear where the commenter got the figures in their response regarding the number of acres proposed for timber harvest, please see Chapter 2 – Alternatives for an accurate description of the acres proposed for timber harvest. Furthermore, the analysis in the FEIS contradicts your assertion that the project actions will “damage” renewable resources. Please see Chapter 3 for significant amounts of additional detail regarding effects of the actions proposed.

Timber Harvest Comment 2: The log landings, temporary roads, skid trails and skyline chutes created for the East Deer Lodge Valley project’s logging activities will be a source of sediment during precipitation events. The only way to prevent erosion from bare soil created by logging activities is to place sediment traps between all bare soil created and live water. This has not been proposed.

Response – Timber Harvest Comment 2

The predicted sediment production from timber units is zero based on location of timber units in relation to live water. Erosion and sedimentation are two different issues, as you are aware.

Timber Harvest Comment 3: The log extraction activities that will occur on the East Deer Lodge Valley project will adversely affect hydrologic processes by 1) reducing canopy interception/evapotranspiration, 2) decreasing hydraulic conductivity and increase soil bulk density, 3) collapsing some of the subsurface pipes, 4) increasing local pore water pressure in the soil which will increase the chance of landslides. This ecological damage cannot be mitigated. The Responsible Official must not deny that this damage will occur without science citations to verify the claim. The Responsible Official must not tell the public that these are acceptable, short term results of timber harvest without science citations to verify the claim.

Response – Timber Harvest Comment 3

Sediment delivery from timber harvest and hauling is considered in the Hydrology section under Overview of Issues Addressed.

Timber Harvest Comment 4: The log extraction activities that will occur on the East Deer Lodge Valley project will remove material that harbors a myriad of organisms, from bacteria and actinomycetes to higher fungi. These organisms play an important role in the forest. Rotting logs are the only way the organic matter in forest soils is replenished. When living trees are removed and not allowed to fall and deteriorate into the soil naturally the future growing conditions will be harmed. This project does not include fertilization to mitigate the loss of organic matter.

Response – Timber Harvest Comment 4

We agree that organic matter maintenance through coarse woody debris recruitment is important and have incorporated regional soil quality standards into the Forest Plan (Soil Standard 1). Please review the Soil Section of Chapter 3. Coarse woody debris ranges from 2-17 tons/acre in the proposed harvest activity areas. The soil quality standards recommend leaving 7-25 tons/acre (Graham et al. 1994). This is also listed as a mitigation measure in Chapter 2, description of Alternative 3, Soil Management.

Timber Harvest Comment 5: Of course the Responsible Official is now trying to determine who will write the denial statements for the 4 timber harvest comments above. Please assure that these denial statements include references to unbiased, independent science that support the denial. We both know that USFS line-officers will say anything to continue their forest's timber program.

Response – Timber Harvest Comment 5

Peer-reviewed literature was reviewed and considered where appropriate in individual resource sections.

Road Construction Comment 1: The Revised DEIS Indicates there will be 8.2 Miles of Road Construction and 32.5 Miles of Reconstruction Associated with this Project

Chief Dombeck recognized the long-term ecological damage caused by forest road construction. His words are quoted below:

Roads often cause serious ecological impacts. There are few more irreparable marks we can leave on the land than to build a road."

Statement by Dr. Mike Dombeck, US Forest Service Chief to Forest Service employees and retirees at the University of Montana. February 1998

Source:

<https://www.uwsp.edu/cnr/gem/Dombeck/MDSpeeches/CD%20COPY/Chief%20Mike%20Dombeck%27s%20Remarks%20to%20Forest%20Service%20Employees%20and%20.htm>

The Responsible Official's Proposed Action ignores Dr. Dombeck's wisdom. No amount of timber harvest justifies the long term damage caused by constructing forest roads. This applies to temporary roads that are not fully obliterated by bringing the soil back to the natural angle of repose (putting the soil in the fills back) and seeding with native grasses.

Response – Road Construction Comment 1

We share your concerns. A closer look at Mr. Dombeck's speech provides more context for the quote you provide.

"Forest roads are an essential part of the transportation system in many rural parts of the country. The benefits of forest roads are many. But they also often cause serious ecological impacts. There are few more irreparable marks we can leave on the land than to build a road."

In this speech, both the importance and risk of roads is discussed. And perhaps most important, the challenging of managing the combination of the two is emphasized. We believe the EDLV project uses balanced approach to forest roads and takes these concerns into consideration. In fact, the EDLV project specifically aligns with that advice. The following are objectives Mr. Dombeck identified in the same speech:

- *More carefully consider decisions to build new roads.*
- *Eliminate old unneeded roads.*

- Upgrade and maintain the roads important to public access.

While temporary roads are not required to have all of the drainage features of a permanent road, they still must meet certain specifications. The road location, prism characteristics, and drainage features must be approved by a certified Forest Service sale administrator. So they are not left solely to the discretion of the logger. The roads are well removed from streams and are not expected to have adverse effects on the project watersheds during their short time of use. The construction and obliteration of the roads has the potential to produce sediment” (i.e., erosion) but delivery to streams is unlikely given the slope and location on the landscape. This essentially means the roads are far enough from streams and the topography of the area is such that our analysis indicated no sediment should reach a stream.

Furthermore, all new temporary roads constructed under the EDLV decision would be decommissioned by obliteration, defined in the Transportation Resource Report as: Road obliteration. A type of road decommissioning in which the road prism is recontoured; cut and fill slopes are restored to natural grades; and slash, stumps, and woody debris is placed on top of the corridor to effectively block vehicle travel.

Road Construction Comment 2: The map of the East Deer Lodge Valley sale area shows a road density that’s so high that it will be impossible for the aquatic resources in the vicinity of the proposed timber sale to function properly. At the present time there is enough road in the national forests of America to stretch to the moon and halfway back. If the Responsible Official were really concerned with serving the public and protecting the resources no roads would be constructed on this project. Indeed, it is not tragic if the trees without road access are left standing. This is a situation where the Responsible Official’s obsession with accumulation maximum volume should yield to the protection of all natural resources.

Response – Road Construction Comment 2

The Forest Plan states that the East Deerlodge Management Area is “managed for timber production, livestock grazing, mining, and dispersed recreation.” We believe the alternatives analyzed provide a well-balanced approach to road management, taking into account both important road access as well as addressing problems with roads that have negative environmental effects. The action alternatives include r decisions that do in fact reduce the overall road density in the area, while improving and retaining important roads that will provide for future access. In addition, the action alternatives will bring the road network more closely in line with the identified minimum system presented in the EDLV Transportation Analysis.

Road Construction Comment 3: The new road construction planned for the East Deer Lodge Valley project will have compacted road surfaces which will generate overland flow containing sediment during precipitation events. Much of this sediment often enters the stream channel system, locally increasing peak flows and increasing aquatic resource-harming turbidity. No mitigation or BMP application will remove all the sediment laden water before it reaches the stream. This should be reflected in the cumulative effects analysis in Chapter 3. Please don’t lowball the sediment being produced from old system roads and old temporary roads that still generate sediment. Please don’t tell the public that such adverse effects are acceptable because they are “short term.”

Response – Road Construction Comment 3

The analyses provided in the environmental effects portion of the FEIS provide estimates of sediment delivered to streams from existing roads; and speak to the differences that would result from elements of proposed activities. The possibility of increased stream flows is also addressed in the Hydrology section. We don’t consider projected effects to be “lowball” estimates. Existing conditions (old roads) are considered as part of the cumulative effects analyses. See design criteria and mitigations under

Aquatic Resources headings in Chapter 2. Great detail is provided in the analysis of effects of roads in the hydrology section.

Road Construction Comment 4: The new road construction planned for the East Deer Lodge Valley project will fragment wildlife habitat and alter animal behavior by causing changes in home ranges, movement, and reproductive success, and will divide large landscapes into smaller patches which will convert interior habitat into edge habitat. This cannot be mitigated. This should be reflected in the cumulative effects analysis in Chapter 3. Please don't lowball the adverse wildlife effects of the road construction to wildlife. Please don't tell the public that such adverse effects are acceptable because they are "short term."

Response – Road Construction Comment 4:

"Road treatments would reduce total road densities in a number of project subwatersheds. . ." We believe that the effects analysis for various resources, notably hydrology and wildlife, accurately depict the expected results of implementing the various project alternatives.. For specific information related to wildlife effects and roads, please review the Wildlife Section.

Road Construction Comment 5: Of course the Responsible Official is now trying to determine who will write the denial statements for the 4 road construction comments above. Please assure that these denial statements include references to unbiased, independent science that support the denial. We both know that USFS line-officers will say anything to continue their forest's timber program.

Response – Road Construction Comment 5

Peer-reviewed literature was reviewed and considered, where appropriate, in individual resource sections.

Continued Comment 5 a: Opposing views Attachment #4 explains this in more detail.

Response – Road Construction Comment 5 a

Thank you for sending the article links in Attachment 4. They appear to be the same documents you sent with your comments on the Draft EIS. We provided a thorough review and response in the Revised DEIS (pp. 742 to 772.) Since they contain no new information we reference the responses in the Revised DEIS documents.

Road Construction Comment 3: Insect Activity should be Allowed to Occur in the Forest. USFS Decision Makers must never Spend Tax Dollars to Prevent Such a Beneficial Natural Disturbance Event.

A forest with no insect activity and tree diseases is an unhealthy forest.

The Revised DEIS indicates one of the goals of the project is to eliminate such a natural disturbance event.

All normal, healthy, fully functioning forests have some stands of trees that die from insect and disease activity.

Thankfully, these healthy forests pass through periods when some conifer tree species in some areas become "degraded" by natural disturbance events. Healthy forests are not static. This life/death cycle is natural for healthy forests and should not be interrupted.

Every (emphasis added) healthy population of living things depends on dying individuals.

Response – Road Construction Comment 3

We agree that life/death is a natural cycle. The Forest Plan Vegetation Objective, included in the Revised DEIS, is “Increase the number of acres of lodgepole pine in the 0-5” diameter-at-breast-height (dbh) class by approximately 74,000 acres, where burned or insect infested stands are dead or dying.” Please see the desired condition heading in the Vegetation Section. In all forest types, seedling and sapling development and management of stand densities allow us to manage forest areas to achieve resilient vegetation communities”. The amount of available snags under each alternative are disclosed in the Vegetation section.

Road Construction Comment 3a: Taking action to exclude insects and diseases from damaging and killing conifer trees reflects an attitude that sound conifer trees made available for corporate profit opportunities are more important than the countless other natural resources in the forest.

Action should not be taken to reduce the insect, disease and drought induced mortality to conifer trees. Such natural disturbance events are necessary to maintain the forest’s biological diversity. Insect and disease activity is an indicator of a healthy properly functioning forest.

Response – Road Construction Comment 3a

The environmental effects of the proposed action are disclosed in the “Affected Environment and Environmental Consequences” chapter of the FEIS under Vegetation. See also the response to the Road Construction Comment above.

Road Construction Comment 3b: Trees killed by insect activity are important habitat for scores of wildlife species.

Trees killed by insect activity provide the organic matter to replenish and enrich mineral soils.

Indeed, dead and dying trees have great ecological value in the forest. These conditions cannot be artificially created.

Opposing views Attachment #15 explains this in more detail.

Response – Road Construction Comment 3b

The environmental effects of the proposed action are disclosed in the Environmental Consequences section under Soils, Vegetation, and Wildlife. We agree that dead and dying trees have ecological value. Snag inventories outside of the proposed treatment units were not conducted; however, of the 17,938 acres identified as lodgepole pine, approximately 16,000 acres (90%) are dead and currently available as snags. This project would reduce the amount available for snags by about 2,000 acres, or approximately 12% of the dead and dying lodgepole pine. The acres treated in this action would meet Forest Plan Standards for snag retention by leaving the remaining 15,000 acres (88%) of dead and dying lodgepole pine type in the project area.

The Opposing Views Attachment #15 does not provide any actual opposing scientific references specific to this project, only quotes about best science. With respect to “the best science available” the project considers the latest and best science available; nearly 90 peer-reviewed scientific documents published as recently as 2011 were used and cited in the vegetation analysis alone.

Poor Lumber Market Comment 1: The Responsible Official Wastes Taxpayer’s Money to Plan a Timber sale at the Present Time

The current demand for wood products is at an all-time low.

Our country is currently facing massive debt. Congress is working to reduce government spending in every way possible.

The Purpose & Need describes why this timber sale is being planned. There is no need for logs. It's unwise to push timber on the nation that isn't needed ... and spend precious dollars and harm the forest ecosystem simultaneously.

Response – Poor Lumber Market Comment 1

The purpose and need of this project is to contribute to the attainment of forest-wide goals and objectives for the following resources: timber management, vegetation, aquatics and wildlife. Forest product utilization that provides economic benefits where project objectives, Forest Plan objectives, and Forest Plan standards can be met is a Timber Management goal in the Forest Plan. The analysis in the Social and Economics section of the FEIS describes the current values associated with the timber sale component of the project. Generally speaking, the market for timber has gone up since the original project was planned.

Poor Lumber Market Comment 2: The article states: “Local log contractors say the Forest Service needs to do a better job in understanding the marketplace before offering timber for sale.” The Beaverhead-Deerlodge National Forest is no different. Selling timber sales now to bolster the timber availability when the market returns to normal is absurd. There is no more room to deck the logs at the mills.

Response – Poor Lumber Market Comment 2

Please review the response above.

Poor Lumber Demand Comment 3: The Responsible Official is proposing this project to fulfill his Regional volume expectations ... it's certainly not needed now with housing starts at an all-time low and with the timber coming from private industrial tree farms more than meeting the domestic need for products made from softwood.

Response – Poor Lumber Market Comment 3

Targets from Regional and National levels of the agency reflect the express desires of Congress as communicated through budget allocations. As such, targets influence work that is done at the unit level. As discussed in the previous response, the market has changed since the original project was proposed; market trends tend to fluctuate as has been the case during the planning process for this project.

Dead & Dying Trees Comment 1: Dead and Dying Trees are the Life-Blood to the Natural Resources in the Forest Any and all normal, healthy, fully functioning forest contains trees that are dead and dying. The Revised DEIS indicates that dead and dying trees will be removed from the sale area.

A sure way to create an unhealthy forest is to remove the dead and dying trees. Humans have not yet learned to interrupt natural processes that have occurred for thousands of years without destroying the process. This is especially true if money motivates the humans to manipulate and harm the forest's natural resources. The Responsible Official provides no information to the public indicating how the ecological benefits of leaving dead and dying trees in place will be replaced artificially.

Response – Dead & Dying Trees Comment 1

The environmental effects of the proposed action are disclosed in the “Affected Environment and Environmental Consequences” chapter of the FEIS. See the responses to the second Road Construction Comment 3 above.

Dead & Dying Trees Comment 2: There are no situations in a natural forest that provide reasons for the Responsible Official to remove the dead and dying trees. This is especially true when corporate profit is the reason the trees are being removed. There is no shortage of raw materials used to make wood products in America.

Response – Dead & Dying Trees Comment 2

The environmental effects of the proposed action are disclosed in the “Affected Environment and Environmental Consequences” chapter of the FEIS. See the responses to the Poor Lumber Market Comment 1 and the second Road Construction Comment 3 of Letter 28.

Dead & Dying Trees Comment 3: Insect activity and diseases of trees are beneficial natural disturbance events. They are meant to occur because that’s how Nature generates dead & dying trees.

Response – Dead & Dying Trees Comment 3

The Opposing Views Attachment #15 does not provide any actual opposing scientific references specific to this project, only quotes about the value of dead trees, most of which the Forest Service agrees with and is in the analysis in a similar form. The environmental effects of the proposed action are disclosed in Chapter 3.

We agree that dead and dying trees have ecological value. Please see the snag discussion in Vegetation section. Soil and wildlife mitigation measures and project design features (Chapter 2) take into account the need for coarse woody debris and snags.

The mountain pine beetle is not at endemic levels on the Beaverhead-Deerlodge National Forest as mentioned in one of the Attachment 14 citations - it has been at epidemic levels since around 1999 on the forest. Many of the citations in Attachment 14 reference to the effects of salvage operations in the context of hazardous fuels reduction. The purpose and need for the EDLV Project does not include reducing hazardous fuels.

Eliminating Fire far from the WUI Comment 1: Stand-replacing fires are not catastrophic in spite of USFS claims to the contrary. Of course merchantable trees burn and die during fires. So what? This would be a problem only if the USFS were mandated to spend taxpayer’s money in the general forest far from any WUI to save merchantable trees for the timber industry. Thankfully, Congress has never indicated that this is a USFS mission.

Response – Eliminating Fire far from the WUI Comment 1

The purpose and need for the EDLV Project does not include reducing hazardous fuels. A stand replacing fire may be catastrophic to species that take advantage of older denser forests, but to species that take advantage young open emerging forest they are not. Many forest types require fire to regenerate. Comment has no specific relevance to this project.

Eliminating Fire far from the WUI Comment 2: If forests aren’t supposed to burn in the forest then why does fire (lightening) come from the sky during the summer when the humidity is low and the temperatures are high?

Response – Eliminating Fire far from the WUI Comment 2

Current policy and Forest Plan direction allows the management of fire with multiple objectives within the Forest boundary. So when fire (lightning) does come from the sky during the summer as you describe we can evaluate the ecological benefits of managing the fire against the potential for loss of a value at risk. This new direction may include suppression on one side of the fire because of structures (values at risk) and managing for a resource like Whitebark pine that benefits from fire, to burn

through it on the other side. The purpose and need includes: timber management, vegetation, wildlife, and aquatic resource goals and objectives. The comment is not specifically relevant to the project.

Eliminating Fire far from the WUI Comment 3: Reducing fuels in the general forest not associated with a WUI is an excuse to extract volume. Please eliminate all references to fuels in the final EA.

Response – Comment 3

The purpose and need for the EDLV Landscape Restoration Management Project is to contribute to attainment of the following forest wide goals and objectives for timber management, vegetation, aquatic resources, and wildlife habitat. In response to earlier comments the fuels portion of the purpose and need was eliminated between the Draft and Revised Draft EIS.

Opposing views Attachment #8 explains this in more detail.

The Fire Management Officer read the articles and did not find them to be opposing views. We agree with the articles and our fire management direction in the Forest Plan is supported by the articles you sent. However they are not relevant to the project because we are not using fire to achieve resource objectives. We are simply using fire to dispose of slash created by activities in the project area. The comments above regarding Wildland Urban Interface (WUI) questions are out of context because there is no WUI identified in the project area. There are also no treatments proposed to reduce fuels or manipulate fire intensity or behavior as mitigation to a WUI.

Eliminating Fire far from the WUI Comment 3a: The Revised DEIS indicates that some clearcutting will be required by the USFS in this timber sale contract. The acreage is cleverly hidden from the public but it will be thousands of acres.

Opposing views Attachment #19 explains this in more detail.

Response – Eliminating Fire far from the WUI Comment 3a

To prevent confusion the term “salvage with clearcut” was simplified by just using the term “salvage” (Chapter 1, Changes Draft to Final).

There has been no attempt to hide what treatments we are proposing, cleverly or otherwise.

Clearcut Comment 1: The Responsible Official has no business treating the public land as if it were a private industrial tree farm especially given that polls show that 94% of the public using the national forests abhor clearcuts. The Responsible Official prefers to serve the resource extraction corporations rather than the American public. Foresters educated in industrial forestry prescribe clearcut RXs because that's the regeneration method that generate the maximum \$\$\$ return from the site. They were educated to manage private industrial tree farms.

Response – Clearcut Comment 1

Please see the purpose and need section of the FEIS as well as the response to the comment immediately above.

Clearcut Comment 1a: (sic) The public deserves to know how the USFS manages (sic) their land. Attachment #26 contains photographs of clearcuts on national forest land. Please choose the clearcut photo that will most closely resemble the clearcuts created as part of the East Deer Lodge Valley timber sale and insert it into the final EIS. If none of the pictures describe the clearcuts, please show the one that will be the closest.

Response – Clearcut Comment 1a

We looked at the photos you sent with your comments. Many were of a small portion of a harvest unit or they were not clear, pixilated, and hard to see. This analysis pertains to the effects of a specific project on the Pintler District. Pictures of clearcuts on other forests not similar to the BDNF (different elevation, moisture regimes, habitat types, plant species, logging systems, forest plans, objectives, etc.) don't give the public an accurate picture, so to speak, of project results.

Clearcut Comment 1b: The Responsible Official has chosen to withhold this important information from the public without a reason.

Response – Clearcut Comment 1b

See the responses above as well as the description of public involvement in Chapter 1

Opposing views Attachment #19 explains this in more detail.

Legal Precedent Requires the Forest Service Responsible Officials to Base their Proposed Projects on Best Science which will Eliminate or Reduce Adverse Ecological Effects

A Federal Register notice and an opinion handed down in the Tenth Circuit Court of Appeals indicate that the Forest Service must base their projects on best science. Please see below.

“The purpose of this interpretative rule is to clarify that, both for projects implementing plans and plan amendments, paragraph (a)’s mandate to use the best available science applies.”

Source: Federal Register / Vol. 69, No. 188, page 58056 , Wednesday, September 29, 2004, Rules and Regulations, http://www.fs.fed.us/r1/projects/plan_rule/interpretative-rule.pdf

“The 1982 forest planning regulations at 36 C.F.R. Part 219 were superseded in November 2000, when new regulations were promulgated. 65 Fed. Reg. 67,568 (Nov. 9, 2000). Under the transition provision of the 2000 regulations, the Forest Service was required to consider the "best available science" when implementing site-specific projects within a forest plan. 36 C.F.R. 219.35(a) (2001).”

Source: The Ecology Center, Inc., v. United States Forest Service United States Court of Appeals, Tenth Circuit, June 29, 2006 An Appeal from the United States District Court for the District of Utah (D.C. No. 2:03-CV-589-TS)

<http://caselaw.lp.findlaw.com/scripts/getcase.pl?navby=search&case=/data2/circs/10th/054101.html>

The transition regulation is still in effect.

Best Science Comment 1: This member of the public feels that the science statements contained in the attachments to these comments constitute science that’s at least as accurate as the science literature in the References section of the DEIS.

Response – Best Science Comment 1

The Opposing Views Attachment #15 does not provide any actual opposing scientific references specific to this project, only quotes about best science.

Best Science Comment 2: The Responsible Official consciously excluded science that describes natural resource harm from the References section in the DEIS. The Responsible Official carefully selected science references that support the timber sale (mostly authored by USDA employees). This clearly shows **that the project is not based on best science.**

Response – Best Science Comment 2:

The EDLV project considers the latest and best science available as consistent with 36 CFR 219.22. Nearly 90 peer-reviewed scientific documents were used and cited in the vegetation analysis alone. Please see the references section of the FEIS for a full listing.

Best Science Comment 3: There are hundreds of opposing views statements included in the attachments. If the Responsible Official is concerned about basing this project on best science, he will examine the literature cited in the attachments and modify this project according to the science that describes methods to reduce the environmental impacts of this timber sale.

Response – Best Science Comment 3:

See the responses to the Best Science Comments 1 and 2 of Letter 28. The Opposing Views Attachment 15 does not provide any actual opposing scientific references specific to this project, only quotes about best science. There is no opposing literature in it to respond to. Peer-reviewed literature was reviewed and considered in individual resource sections.

Opposing views Attachment #15 explains this in more detail.

Attachment review: The Opposing Views Attachment #15 provides quotes about best science and does not provide any actual opposing scientific references specific to this project. There is no peer-reviewed opposing literature provided.

Dangerous Herbicides Comment 1: The Revised DEIS indicates glyphosate will be applied to unwanted vegetation in the sale area.

Simply signing an area that will (or has been) subject to herbicide application is inadequate protection for the public. The only way to protect the people who mix and apply the herbicides is to require them to wear hazmat suits. Applying these poisons by hand does not prevent drift ... even with no apparent wind. Applying these dangerous herbicides from the helicopters air is criminal.

The only foolproof way to protect the public is to apply no herbicides of any kind ... especially when there are effective alternatives to noxious weed eradication and control. Yes the mechanical and biological control methods are more expensive than herbicides, but does the Responsible Official have an acceptable number of human deaths for every dollar saved?

Here's a summary of the liability that Federal employees assume when doing their jobs. In invite the Responsible Official to validate this information by contacting an OGC attorney.

A Federal employee may be sued in his/her individual capacity for injuries or damages to persons or property. Individuals who violate environmental laws or who injure or damage the persons or property of others as a result of carelessness may be personally liable for the consequences.

Where the actions of a Federal employee cause injuries or damage to the person or property of another, the injured party may bring an action to recover the cost of the damage.

Most of the environmental statutes impose criminal liability for willful or knowing violations. Some statutes impose criminal liability for negligent violations. Individual Federal employees may be charged with criminal liability if their actions or inactions meet the requirements for imposing liability. Federal or State prosecutors may bring criminal charges. Liability often does not depend on knowledge of, or personal participation in, the acts made criminal. With respect to violations that occur, the term "knowing" is defined as knowledge that the requirement or regulation exists, more so than to actual knowledge of specific violations. The Supreme Court has said "where dangerous or noxious waste materials are involved, the probability of regulation is so great that anyone who is aware that he is in possession of them must be presumed to be aware of the regulations."

Willfully taking actions that could prove fatal to people without their consent is a felony!

See the Judge Haggarty's opinion in BLUE MOUNTAINS BIODIVERSITY PROJECT v. UNITED STATES FOREST SERVICE

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF OREGON FOR THE DISTRICT OF OREGON, December 2, 2002.

An excerpt of the opinion:

"A. The U.S. Forest Service is hereby enjoined from implementing the portion of the June 26, 2000 Decision Notice and Finding of No Significant Impact for the Noxious Weed Control Project on the Malheur National Forest that involves the use or application of herbicides and biological controls until and unless it considers, evaluates and discloses in an Environmental Impact Statement or Supplemental Environmental Impact Statement the individual and cumulative impacts of herbicide use in accordance with this Court's Opinion and Order. Any such EIS must evaluate categories of new information since the 1988 Managing Competing and Unwanted Vegetation Plan Environmental Impact Statement was issued, including:

- (1) the causes and increasing spread of noxious weeds, (and the contribution of certain management activities, such as cattle grazing, to the introduction and spread of noxious weeds);*
- (2) evidence of the neuro and immuno-toxicity of herbicides;*
- (3) toxic effects and increased susceptibility of amphibians to herbicide impacts;*
- (4) endocrine disruption caused by herbicides;*
- (5) effects from additives to herbicide full formulations including the impacts from surfactants;*
- (6) metabolites, the breakdown product of herbicides; and*
- (7) the availability of new species-specific herbicides."*

Forest Service herbicide approval EISs do not include recent research findings that contradict the earlier safety research used in the USFS herbicide approval documents. Most Forest Service safety research was done at least 10 years ago. The documentation of the research conducted a decade ago is contained in EISs published in 2002.

This research base for the Forest Service herbicide approval EISs was not done by agency scientists. The research was done by laboratories contracted and paid by the herbicide manufacturer. These research conclusions were then passed on to the Forest Service and formed the basis for the agency safety findings documented in EISs.

Dangerous Herbicides Comment 1 summary: Certainly, noxious weeds and non-native plants are a major problem on public land. The Responsible Official refuses to discuss recent glyphosate toxicology studies in the final EIS.

Response – Dangerous Herbicides Comment 1

Glyphosate is an EPA registered herbicide that is approved for use on the Beaverhead-Deerlodge National Forest. All applications will adhere to label requirements and the mitigation described in the Beaverhead-Deerlodge National Forest Noxious weed Control FEIS and ROD (May 2002).

Dangerous Herbicides Comment 2: The Responsible Official has no problem taking actions that might kill the wildlife, fish and human visitors to the forest.

Response – Dangerous Herbicides Comment 2:

The responsible official is certainly not OK with killing anything, let alone human visitors. If the analysis in the FEIS stated or implied that this was the case the responsible official would take immediate steps to change course. Nothing in the analysis shows that this is the case.

Dangerous Herbicides Comment 3: The Responsible Official refuses to tell the public why the safety direction they reference contains only research that at least 5 years old and excludes recent research. This is because the new research exposes the dangerous toxicity of glyphosate.

Opposing views Attachment #9 explains glyphosate toxicity in more detail. (FS review of 9 and 18 provided below).

The Responsible Official indicates in the Revised DEIS for the East Deer Lodge Valley project that herbicide label directions will be followed. Please beware.

It is just being revealed that for the last few decades certain corporations were using a variety of methods to convince government regulatory agencies to look the other way. This is true for the EPA that is responsible for testing herbicide safety.

The EPA does not test pesticides for safety. It relies on the manufacturers' test data to make judgments. Recent probes have found that the experiments, on which these data have been based, have been designed to show only what the manufacturer would like them to show. Indeed, the broken link in the process is that the chemical manufacturers pay the independent labs to test the chemicals and suggest label directions. These are the same label directions that the Responsible Official relies on in BDNF Noxious weed Control FEIS and ROD (May 2002)

Response – Dangerous Herbicides Comment 3

Herbicides used in the project area will be applied by qualified operators and sprayed according to label specifications. EPA is the agency tasked with registering and authorizing herbicides for use. If the EPA determines new restrictions and precautions are required we will certainly follow them.

Opposing views Attachment #18 explains this situation in more detail.

Attachment Review for 9 and 18. We read the articles in your Attachments 9 and 18. We are required by law to follow label directions and use only herbicides authorized and registered by EPA.

Herbicides used within the project will be applied by qualified operators and sprayed according to label specifications.

Dangerous Herbicides Comment 4: After reading the dangers the Responsible Official still chooses to apply the dangerous herbicides to vegetation on public land. The Responsible Official does not tell the public if alternative noxious weed treatments were considered and why they were rejected.

Response – Dangerous Herbicides Comment 4:

An integrated weed control program has been in place for many years within the project area, including prevention, mechanical, biological, and chemical. The combination of these practices has been successful in reducing the total acres of noxious weeds. Past weed control efforts, including Forest Service and contract spraying have been the most effective in limiting the rate of spread and reducing plant density. Most noxious weeds produce large numbers of seeds. It may take multiple herbicide applications to control a noxious weed infestation. As a result of BMP's, monitoring, and mitigation associated with other activities and an aggressive noxious weed control program, infested acres have been reduced in the project area. The noxious weed inventory in 2000 identified 1,352 acres within the project area while the 2010 inventory identified 780 acres within the project area - a

43% reduction of infested acres. Forest plan monitoring reports (2006-2007) state that BMP's are effective in reducing noxious weed spread.

Dangerous Herbicides Comment 5: The Responsible Official still chooses to apply the dangerous herbicides to vegetation on public land. The reason is because safer noxious weed treatment alternatives are more expensive. The Responsible Official does not tell the public the extra cost for the alternatives. The public will want to know the cost of protecting the health of their children, therefore this information should be included in the final EIS.

Response – Dangerous Herbicides Comment 5

An integrated weed control program has been in place for many years that includes the project area. It includes prevention, mechanical, biological, and chemical. The combination of these practices has been successful in reducing the total acres of noxious weeds. Past weed control efforts, including agency crews and contract spraying have been the most effective in limiting the rate of spread and reducing plant density.

Mechanical treatment (hand pulling) is more costly per acre than many of the other methods, (Noxious Weed EIS) including biological and chemical treatment.

Concluding Comment: It's certain that when the Proposed Action described in the DEIS is implemented the natural resources in (and downstream) from the project area will be degraded. This is not consistent with the duty of the Responsible Official to implement actions that will benefit the majority of the American people.

Response – Concluding Comment

Please see the Proposed Action displayed in Chapter 1 as well as Changes Draft to Final to see the adjustments we made in response to comments throughout the process. Furthermore, in the analysis of effects by resource in Chapter 3 we found long-term improvement of the Aquatic system due to the proposed activities.

Letter 29 Montana Fish Wildlife and Parks, Region 2

Comment 1: Montana Fish, Wildlife & Parks (FWP) has reviewed the Revised DEIS Summary for this proposal for restoring terrestrial and aquatic conditions and processes on Beaverhead-Deerlodge National Forest lands from east and southeast of Deer Lodge to the Continental Divide. FWP continues to support this landscape restoration management project, which involves public and private partnering to enhance forest health while producing revenue. We believe that the new preferred Alternative 3 generally offers increased advantages for wildlife and fisheries, compared with Alternative 2. Thank you for again providing the opportunity for FWP to comment on this project.

Response – Comment 1

Thank you for reviewing the document and submitting your comments.

Letter 30 Arie Lee, LadyBug Trucking, Inc.

Comment 1: As of June 13, 2010 I am the property owner of the Silver King Lodge. Roads 9321 and 9322 go to and through my private land.

It is my understanding that Road 9321 and 9322 are proposed haul roads. At this time, the forest service does not have permission to use the portion of the roads that cross my private land. I do support however decommissioning road 9322.

At this time, the only access I will provide the forest service, upon notification to us, is to conduct law enforcement response to natural disasters, i.e., wildfires, and search and rescue efforts on the National Forest Service land in cooperation with the state and counties.

Response – Comment 1

Thank you for writing with your concerns. The Forest Service does not support road or trail use not authorized in existing use agreements. If any proposed haul routes require your authorization, we hope to work with you to ensure the necessary agreement is in place prior to use. Please reference the Draft Record of Decision Selected Alternative Transportation Map for additional detail on haul route locations.